

**IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF OHIO
EASTERN DIVISION**

**RESEARCH INSTITUTE AT
NATIONWIDE CHILDREN'S
HOSPITAL**
700 CHILDREN'S DRIVE
COLUMBUS, OHIO 43205

Plaintiff,

vs.

YU ZHOU
C/O BUTLER COUNTY SHERIFF'S OFC
705 HANOVER STREET
HAMILTON, OH 45011

And,

LI CHEN
C/O DELAWARE COUNTY JAIL
844 US 42 NORTH
DELAWARE, OH 43015

And,

AVALON GLOBOCARE CORP.
C/O REGISTERED AGENT
THE CORPORATION TRUST CENTER
1209 ORANGE ST.
WILMINGTON, DE 19801

And,

GENEXOSOME TECHNOLOGIES, INC.
C/O REGISTERED AGENT
168 DORCHESTER SQUARE, SUITE 101,
WESTERVILLE, OHIO 43081

Defendants.

Case No. 2:19-cv-04574

Judge _____

Magistrate Judge _____

JURY DEMAND

Plaintiff Research Institute at Nationwide Children's Hospital ("RINCH"), for its Complaint against Defendants Yu Zhou ("Zhou"), Li Chen ("Chen"), Avalon GloboCare Corp. ("Avalon"), and GenExosome Technologies, Inc. ("GenExosome") (collectively, "Defendants"), alleges and avers as set forth in more detail below. This Complaint is being filed following the public disclosure on or about September 16, 2019, of the criminal complaint against Defendants Zhou and Chen in the case: *United States of America v. Zhou et al.*, Case No. 2:19-cr-163 (S.D. Ohio) (filed and sealed on July 23, 2019) ("Criminal Indictment").

PARTIES

1. Plaintiff RINCH is a non-profit corporation organized under the laws of the State of Ohio. Its principal place of business is located at 700 Children's Drive, Columbus, Ohio 43205. RINCH is also known as the the Abigail Wexner Research Institute at Nationwide Children's Hospital.

2. On information and belief, at least through July of 2019, Defendant Zhou was a PhD and Senior Research Scientist with a current and/or former place of residence at 6968 Ernest Way, Dublin, Ohio 43017-1085 and/or 9175 Judicial Drive, #6318, San Diego, California 92122. Zhou was previously employed by RINCH as alleged herein.

3. On information and belief, at least through July of 2019, Defendant Chen was a PhD and Senior Research Scientist with a current and/or former place of residence at 9175 Judicial Drive, #6318, San Diego, California 92122. Chen was previously employed by RINCH as alleged herein.

4. On information and belief, Defendant Chen and Defendant Zhou are married.

5. On information and belief, Defendant Avalon is a Delaware corporation with a principal place of business at 83 South Street, Suite 101, Freehold, New Jersey 07728. On

information and belief, Avalon does business in the State of Ohio, *inter alia*, through its wholly owned subsidiary GenExosome.

6. On information and belief, Defendant GenExosome is a Nevada corporation with a principal place of business at 83 South Street, Suite 101, Freehold, New Jersey 07728. GenExosome also does business in this District based on its foreign corporation filing with the Ohio Secretary of State on or about November 30, 2017 wherein its business address is listed as 168 Dorchester Square, Suite 101, Westerville, Ohio 43081.

7. On information and belief, at least through July of 2019, Defendant Zhou was also listed with the Ohio Secretary of State as the registered agent for GenExosome, with a registered agent address of 6968 Ernest Way, Dublin, Ohio 43017-1085.

JURISDICTION AND VENUE

8. This Court has subject matter jurisdiction over this matter pursuant to 28 U.S.C. § 1331 based upon RINCH's claim arising under the Defend Trade Secrets Act ("DTSA"), 18 U.S.C. §§ 1836, et seq.

9. This Court has supplemental jurisdiction over any state law claim pursuant to 28 U.S.C. § 1337 as RINCH's claims arise from and form part of the same controversy from which RINCH seeks relief.

10. This Court also has subject matter jurisdiction over this matter pursuant to 28 U.S.C. § 1332 based upon the diversity of citizenship of the parties and the amount in controversy exceeding seventy-five thousand dollars (\$75,000) exclusive of interest and costs.

11. Defendants' acts as set forth herein satisfy one or more of the requirements of Ohio's Personal Jurisdiction statute, Ohio Rev. Code § 2307.382(A). At least through July of 2019, each Defendant resided in and/or transacted business in Ohio as alleged herein and has

engaged in the wrongful acts alleged herein in Ohio and/or has engaged in the wrongful acts alleged herein outside of Ohio that have caused injury to RINCH within the state of Ohio. Each Defendant is therefore subject to personal jurisdiction in this judicial district.

12. Venue is proper in this Court under 28 U.S.C. § 1391(b) because a substantial part of the events giving rise to the claims occurred within this venue.

BACKGROUND

13. This action is premised on the Defendants' breach of contract and theft of RINCH'S valuable trade secrets, confidential, and/or proprietary information, or other intellectual property relating to oncology, regenerative medicine, methods of exosome enrichment, and exosome-based therapeutics and/or diagnostic tools that were not generally known and afforded RINCH a competitive advantage. RINCH's valuable trade secrets, confidential, and/or proprietary information, or other intellectual property encompassed compositions and methods for treating liver fibrosis, liver cancer, oral cancer and oral leukoplakia, endometriosis and ovarian cancer, as well as exosome enrichment methods as described herein. Defendants have benefited from and been unjustly enriched as a result of Defendants' complained of acts, which have resulted in commercial sales of products and services such as GenExosome's "Exosome Products" and "Exosome Services," as well as Avalon's well publicized business ventures premised on exosome technology, as described herein. RINCH brings this action seeking compensatory, equitable, and other relief based on Defendants' wrongful acts.

Research Institute at Nationwide Children's Hospital

14. RINCH is a pediatric research center at Nationwide Children's Hospital ("NCH") focused on improving the health of children by engaging in high-quality, cutting-edge research¹.

¹ Employees working at RINCH are also bound by NCH policies, which apply to NCH and its affiliated corporations.

15. Among other medical achievements, RINCH is considered an industry leader in oncology, regenerative medicine, and exosome-based therapeutics.

16. In 2018, RINCH received \$105.9 million in total external funding and ranked fifth among freestanding pediatric research facilities in funding from the National Institutes of Health, a part of the United States Department of Health and Human Services.

RINCH's Development of Exosome-Based Therapeutics Technology

17. Since as early as 2010, RINCH has researched extracellular vesicle compositions and methods for the treatment and diagnosis of various diseases. An “extracellular vesicle” is a membrane-bound vesicle produced by a cell and comprising one or more cell-derived components such as RNA, DNA, protein, and lipids contained as “cargo” within the vesicle.

18. “Exosomes” are among the smallest type of extracellular vesicles, generally having a diameter of about 30 to 150 nanometers. They can be produced by many different types of cells such as stem cells, red blood cells, and specialized liver cells called hepatic stellate cells (“HSCs”), and the cell types produce different exosome compositions having different therapeutic applications. Exosomes have specialized functions and play a key role in processes such as coagulation of blood, intercellular signaling, and cellular waste management. Clinical applications of exosomes include their use in therapy and as biomarkers for health and disease.

19. To analyze the payload of exosomes and identify exosome-specific biomarkers, the exosomes must first be separated from the other non-exosome components of the matrix in which they reside (*e.g.*, conditioned media, biofluid, tissue, other types of extracellular vesicles). As noted by Théry *et al.*, the absolute *purification* or complete *isolation* of exosomes from other entities is unrealistic. Théry *et al.*, *Journal of Extracellular Vesicles* 8:1, 1535750, DOI: 10.1080/20013078.2018.1535750 (2018), p. 11. Accordingly, experts in the field prefer the use

of the more precise terms *separation* and *concentration/enrichment in lieu of purification or isolation*. *Id.* A composition that is *enriched* for exosomes refers to a composition in which the *concentration* of exosomes is *increased* relative to the volume or to other non-exosome components. Exosome *enrichment* of a composition can be accomplished by *separating* (colloquially referred to as *purifying* or *isolating*) exosomes from other non-exosome entities. In other words, the *concentration* of exosomes in the composition to which the separation technique was applied will be increased relative to the other non-exosome components. As used herein, “exosome enrichment” is intended to encompass exosome processing, isolation, concentration, and/or purification methods.

20. microRNAs (“miRNAs”) are an important type of RNA cargo found within exosomes. miRNAs function to regulate gene expression and are known to be involved in major biological processes such as development, differentiation, growth, and metabolism. The misregulation of miRNAs is linked to the development of diseases such as liver disease, cancer, cardiovascular disease, and inflammatory disease. Because of their important role in disease etiology, miRNAs are strong candidates for disease therapies. Accordingly, several preclinical and clinical trials have been initiated for miRNA-based therapeutics.

21. Gail E. Besner, M.D. is the Chief of Pediatric Surgery at Nationwide Children’s hospital (“NCH”) and a Principal Investigator in the Center for Perinatal Research and Neonatology at RINCH. Among her many accomplishments, Dr. Besner established and directed a Basic Science Research Laboratory in Pediatric Surgery and has secured continuous funding from the National Institutes of Health (“NIH”) to support her research since 1995. She has increased NCH’s Pediatric Surgery federal funding by at least six-fold since becoming Chief in 2012. As an example, the pediatric faculty at NCH were awarded \$14 million of external funding in 2017. Dr.

Besner has received continuous NIH funding for over two decades, with two to three R01 grants held at all times. Dr. Besner has likewise increased NCH Pediatric Surgery publication and presentation by ten-fold. In 2010, Dr. Besner was chosen by the Children's Circle of Care ("CCC") to represent NCH at the 2010 Children's Circle of Care North American Leadership Conference. It is believed that only one other pediatric surgeon in the United States has ever received this distinction.

22. Dr. Besner's research at RINCH relates to uncovering the role of miRNA in disease progression and treatment, including cancers and diseases associated with fibrosis. A focus of Dr. Besner's research at RINCH is directed to heparin-binding EGF-like growth factor ("HB-EGF") and its ability to protect the intestines from various forms of injury. Her research laboratory investigates the effects of HB-EGF on stem cells, stem cell transplantation in protection of the intestines from injury, production of tissue engineered intestine, and mechanisms and signaling pathways used by HB-EGF in the protection of cells in the intestine.

23. Dr. Besner is a named inventor on at least the following patents and patent applications:

- Heparin-binding Mitogen with Homology to EGF, U.S. Patent No. 5,811,393;
- Heparin-binding Mitogen with Homology to EGF, European Patent Application No. 92900987.6;
- Heparin-binding Mitogen with Homology to EGF, Canadian Patent No. 2094045;
- Methods of Treating Intestinal Ischemia Using Heparin-Binding Epidermal Growth Factor, U.S. Patent No. 7,276,479;
- Methods of Treating Intestinal Ischemia Using Heparin-Binding Epidermal Growth Factor, U.S. Patent No. 6,191,109;
- Methods of Treating Intestinal Ischemia Using Heparin-Binding Epidermal Growth Factor, U.S. Patent No. 6,387,878;
- HB-EGF for Use in Methods of Treating and Preventing Intestinal Injury Related to Hemorrhagic Shock and Resuscitation, U.S. Patent No. 8,093,213;

- HB-EGF for Use in Methods of Treating and Preventing Intestinal Injury Related to Hemorrhagic Shock and Resuscitation, U.S. Patent No. 9,060,977;
- Method of Treating Necrotizing Enterocolitis Using Heparin Binding Epidermal Growth Factor, U.S. Patent Appl. No. 13/123,420;
- Method of Treating Necrotizing Enterocolitis Using Heparin Binding Epidermal Growth Factor, U.S. Patent Appl. No. 13/793,940;
- Administration of Heparin Binding Epidermal Growth Factor for the Protection of Enteric Neurons, U.S. Patent Appl. No. 12/872,961;
- Administration of Heparin Binding Epidermal Growth Factor for the Protection of Enteric Neurons, U.S. Patent Appl. No. 13/670,005;
- Methods of Treating Intestinal Injury Using Heparin-Binding Epidermal Growth Factor and Stem Cells, U.S. Patent Appl. No. 13/402,672;
- Tissue Engineered Intestine, U.S. Patent Appl. No. 14/774,045;
- Probiotic Formulations and Methods for Use, Australia Patent Appl. No. 2015227075;
- Probiotic Formulations and Methods for Use, Canada Patent Appl. No. 2,941,694;
- Probiotic Formulations and Methods for Use, Europe Patent Appl. No. 15710693.1;
- Probiotic Formulations and Methods for Use, Japan Patent Appl. No. 2016-555766;
- Probiotic Formulations and Methods for Use, U.S. Patent Appl. No. 15/257,673;
- Probiotic Formulations and Methods for Use, Japan Patent Appl. No. 2018-38713;
- Prebiotic Formulations, U.S. Patent Appl. No. 15/649,352;
- Methods of Delivering Heparin-Binding EGF-Like Growth Factor Using Stem Cell Generated Exosomes, U.S. Patent Appl. No. 15/123,892;
- Methods for Detecting and Treating Hepatic Cancers, U.S. Provisional Patent Appl. No. 62/795,446;
- A Novel Method for Monitoring and Treating Oral Cancer, U.S. Provisional Patent Appl. No. 62/795,441;
- A Novel Method for Monitoring Endometriosis and Associated Disorders, U.S. Provisional Patent Appl. No. 62/790,337; and

- Methods to Identify and Treat Cisplatin-Resistant Ovarian Cancer, U.S. Provisional Patent Appl. No. 62/790,928.

24. David R. Brigstock, Ph.D. is a Professor of Pediatric Surgery at NCH and a Principal Investigator at the Center for Clinical and Translational Research at RINCH. A focus of Dr. Brigstock's research at RINCH relates to uncovering the role of miRNA in disease progression and treatment, including cancers and diseases associated with fibrosis. Dr. Brigstock's research at RINCH involves the study of mechanisms of fibrosis in the liver and pancreas and developing innovative methods by which fibrosis can be assessed and treated. Liver fibrosis (also referred to as hepatic fibrosis) involves aberrant wound healing in which excessive connective tissue builds up in the liver. Dr. Brigstock's research laboratory investigates novel regulation of the main fibrosis-causing cell type in the liver, which is called a hepatic stellate cell ("HSC"). Since approximately 2010, he has studied exosomes that are produced by HSCs and other liver cell types, and which shuttle complex molecular information between them. His research has shown that exosomes transfer critical molecular signals between neighboring cells, including connective tissue growth factor ("CTGF"), which drives fibrosis pathways in HSC, and a microRNA, which dampens CTGF production. His research has also shown that the cargo within the exosomes (including CTGF and microRNAs) may offer improved diagnostic options for non-invasive assessment of liver disorders such as liver fibrosis.

25. Dr. Brigstock's interest in CTGF and liver fibrosis dates back about two decades when, as a junior faculty member of RINCH, he discovered a novel form of CTGF. As a result, Dr. Brigstock is recognized world-wide as a leader in CTGF, especially its role in liver fibrosis. He was one of the pioneers in the CTGF field and helped to form the International CCN Society ("ICCNS") which supports all scientists working on CTGF and related molecules. For example, Dr. Brigstock's leadership role in the field of liver fibrosis research is demonstrated by his

appointment in 2017 as a Fellow of the American Association for the Study of Liver Diseases (“AASLD”). AASLD is the leading organization of scientists and health care professionals committed to preventing and curing liver disease. AASLD fosters research that leads to improved treatment options for millions of liver disease patients. Dr. Brigstock currently serves on the steering committee of AASLD’s Special Interest Group in Liver Fibrosis.

26. Dr. Brigstock is a named inventor on at least the following patents and patent applications:

- Heparin-Binding Growth Factor Polypeptides, U.S. Patent No. 5,876,730;
- Heparin-Binding Growth Factor Polypeptides, EU Patent No. 1003545;
- Heparin-Binding Growth Factor Polypeptides, Norway Patent Appl. No. 20000000579;
- Antibodies to Heparin-Binding Growth Factor Polypeptides, U.S. Patent No. 7,897,732;
- Heparin-Binding Growth Factor Polypeptides, Canada Patent Appl. No. 2,299,411;
- Heparin-Binding Growth Factor Polypeptides, U.S. Patent Appl. No. 09/258,547;
- Heparin-Binding Growth Factor Polypeptides, U.S. Patent Appl. No. 09/259,804;
- Heparin-Binding Growth Factor Polypeptides, U.S. Patent Appl. No. 09/259,648;
- Heparin-Binding Growth Factor Polypeptides, Japan Patent No. 4638027;
- Heparin-Binding Growth Factor Polypeptides, Germany Patent No. 69839516.6;
- Heparin-Binding Growth Factor Polypeptides, France Patent No. 1003545;
- Heparin-Binding Growth Factor Polypeptides, United Kingdom Patent No. 1003545;
- Heparin-Binding Growth Factor Polypeptides, Netherlands Patent No. 1003545;
- Unique Integrin Binding Site In Connective Tissue Growth Factor (CTGF), U.S. Patent Appl. No. 10/955,860.

- Unique Integrin Binding Site In Connective Tissue Growth Factor (CTGF), U.S. Patent Appl. No. 11/940,833.
- Compositions and Methods for Treating Hepatic Fibrosis, U.S. Patent Appl. No. 15/515,570;
- Methods for Detecting Hepatic Fibrosis and Responsiveness to Therapy, International Patent Appl. No. PCT/US2016/054215;
- Methods for Detecting Hepatic Fibrosis and Responsiveness to Therapy, U.S. Patent Appl. No. 15/764,284;
- Methods for Detecting Hepatic Fibrosis and Responsiveness to Therapy, Europe Patent Appl. No. 16782140.4
- Methods for Detecting and Treating Hepatic Cancers, U.S. Provisional Patent Appl. No. 62/795,446;
- A Novel Method for Monitoring and Treating Oral Cancer, U.S. Provisional Patent Appl. No. 62/795,441;
- A Novel Method for Monitoring Endometriosis and Associated Disorders, U.S. Provisional Patent Appl. No. 62/790,337; and
- Methods to Identify and Treat Cisplatin-Resistant Ovarian Cancer, U.S. Provisional Patent Appl. No. 62/790,928.

27. Defendants Zhou and Chen learned about RINCH's valuable exosome technology

while working under Drs. Brigstock and Besner at RINCH. As an example, Dr. Brigstock's lab's success in purifying exosomes is documented as early as the abstract presented in November 2012 at the ASSLD annual meeting [Chen L, Brigstock DR (2012) Regulation of connective tissue growth factor (CTGF) expression in hepatic stellate cells by intercellular transfer of micro-RNA214: A paradigm for exosome-mediated control of fibrogenic signaling in the liver. *Hepatology* 56 (suppl) A131]. In addition, Dr. Brigstock's additional work in the area was submitted for publication via his and Chen's 2014 publication in *Hepatology* ("2014 *Hepatology* Publication"): Chen, L. *et al.* "Epigenetic Regulation of Connective Tissue Growth Factor by MicroRNA-214 Delivery in Exosomes From Mouse or Human Hepatic Stellate Cells,"

Hepatology (2014) 59(3): 1118-29. Information relating to exosome enrichment is in the supplementary section and is depicted in Fig. 4 of that paper, wherein the enrichment technique used was ultracentrifugation.

28. Dr. Brigstock has also conducted NIH-funded studies on pancreatic fibrosis, with a special focus on the role of exosomes in transmitting molecular information from the principal fibrosis-producing cells of the pancreas, which are called pancreatic stellate cells. RINCH's further work in this area was published in *J. Cell Communication and Signaling*, "Connective tissue growth factor (CCN2) and microRNA-21 are components of a positive feedback loop in pancreatic stellate cells (PSC) during chronic pancreatitis and are present in PSC-derived exosomes," *J. Cell Commun. Signal* (2014) 8(2):147-56. This paper discusses the use of ultracentrifugation and also a kit ["ExoQuick" made by System BioSciences]. Defendant Chen working under Dr. Brigstock's direction was involved in that exosome work on RINCH's behalf.

29. RINCH's exosome technology was also the basis for at least two grant applications, 1 R21 AA023626-01 (Exosome platforms for assessment and therapy of chronic liver disease) and 1 RO1 AA023776-01 (Exosomes in hepatic stellate cell function and liver fibrosis) that were submitted in, respectively, February and June of 2014. Those grant applications contain information that relied implicitly on RINCH's ability to purify exosomes.

30. While some of RINCH's valuable intellectual property regarding exosome technology and exosome enrichment techniques was published in the publications noted, other aspects learned by Defendants Zhou and Chen were held as RINCH trade secrets.

31. RINCH's research has led to the development of compositions and methods for exosome therapeutics and exosome-based diagnostics. RINCH has invested substantial time and resources developing these compositions and methods of exosome-based diagnostic and

therapeutic methods for various diseases including intestinal disorders and liver disorders such as liver fibrosis, alcoholic liver disease, chronic liver disease, and liver cancer, and continues to devote resources to improve upon its existing technology and to create new compositions and methods relating to the same.

RINCH's Trade Secrets

32. At the time of Defendants' acts that are the subject of this Complaint, research conducted in Drs. Besner and Brigstock's respective laboratories at RINCH produced data, technical information, process, procedure, method, technique, improvement, invention, technology, and know-how related to oncology, regenerative medicine, methods of exosome separation and/or enrichment, and exosome-based therapeutics that were not generally known, including at least the following:

- Compositions and methods for liver fibrosis ("RINCH Liver Fibrosis Trade Secrets"). The compositions discovered at RINCH are useful for methods of diagnosing and treating liver fibrosis. The compositions include exosome compositions and compositions of miRNAs.
- Compositions and methods for liver cancer ("RINCH Liver Cancer Trade Secrets"). The most common form of liver cancer is hepatocarcinoma ("HCC"), which accounts for 70-90% of primary liver cancer. 90% of HCC develops due to liver fibrosis, chronic liver inflammation, or cirrhosis, a late-stage liver disease which occurs when fibrotic scar tissue replaces healthy tissue. The compositions discovered at RINCH are useful for methods of diagnosing and treating liver cancer. The compositions include exosome compositions and compositions of miRNAs.
- Compositions and methods for oral cancer and oral leukoplakia ("RINCH Oral Cancer Trade Secrets"). Oral cancer includes cancers of the lips, tongue, cheeks, floor of the mouth, hard and soft palate, sinuses, and pharynx (throat). Oral leukoplakia is a non-cancerous lesion that can develop into oral cancer. The compositions discovered at RINCH are useful for methods of diagnosing and treating oral cancer and oral leukoplakia. The compositions include exosome compositions and compositions of miRNAs.
- Compositions and methods for endometriosis and ovarian cancer ("RINCH Ovarian Cancer Trade Secrets"). Endometriosis is a fibrotic condition in which the layer of tissue that normally covers the inside of the uterus grows outside of it.

Women with endometriosis have an elevated risk of developing ovarian cancer, a type of cancer that originates in the ovaries. Ovarian cancer is the fifth leading cause of cancer death among women. The compositions discovered at RINCH are useful for methods of diagnosing and treating endometriosis and ovarian cancer. The compositions include exosome compositions and compositions of miRNAs.

- Compositions and methods for detecting exosomal microRNA.
- Exosome separation and/or concentration/enrichment methods, including but not limited to novel methods of exosome isolation, particularly related to isolating exosomes from fluid samples as small as, and smaller than, approximately 20 microliters (“RINCH Exosome Enrichment Trade Secrets”).

The foregoing trade secrets are collectively referred to as the “RINCH Trade Secrets.”

33. The RINCH Trade Secrets reflect improvements over prior data, technical information, process, procedure, method, technique, improvement, invention, technology, and know-how related to compositions and methods for treating various diseases including liver fibrosis, liver cancer, oral cancer, oral leukoplakia, endometriosis, and ovarian cancer. RINCH Trade Secrets also provide RINCH with a competitive advantage in the fields of diagnostic medicine, exosome enrichment, and biological therapeutics.

34. At the time of Defendants’ acts that are the subject of this Complaint, the RINCH Trade Secrets derived independent economic value, actual or potential, from not being generally known to, and readily ascertainable by proper means by, other persons who could obtain economic value from their disclosure or use.

35. In addition, the RINCH Trade Secrets were subject of efforts that are reasonable attempts to protect the secrecy of this information in order to protect its value. Such attempts included, but were not necessarily limited to:

- educating all RINCH employees about RINCH’s confidential information, including research information such as the RINCH Trade Secrets;
- conducting periodic training for RINCH employees on the handling of confidential information, scientific/business standards of conduct, the ownership of research data, and responsible research conduct, among other topics;

- requiring employees to sign employee handbooks that set forth confidentiality obligations with respect to RINCH proprietary information, including, for example, requiring employees such as Defendants Chen and Zhou to sign an Employee Handbook Acknowledgement;
- requiring employees such as Defendants Chen and Zhou to sign off on RINCH's Patents & Copyright Administrative Policy and to further acknowledge adherence to such Policy whenever submitting Invention Disclosures relating to inventions to be owned by RINCH (including but not limited to those inventions reflected by the RINCH Trade Secrets);
- requiring employees such as Defendants Chen and Zhou to agree to adhere to policies set forth in NCH's Corporate Integrity Program, including, for example, requiring employees such as Defendants Chen and Zhou to sign a Certification Related to Nationwide Children's Corporate Integrity Program;
- requiring that RINCH confidential and proprietary information be kept in strict confidence and not communicated to any unauthorized persons, including, for example, requiring employees such as Defendants Chen and Zhou to sign NCH's Confidentiality and Security Agreement ("Confidentiality Agreement") (which includes obligations related to both confidentiality and computer system security);
- requiring identification badges to be worn by RINCH employees, and certain vendors, and visitors, as authorization to be on RINCH premises;
- establishing and enforcing information security and privacy management standards to safeguard confidential and internal RINCH information, including data protection, physical and environmental safeguards, including access control to security sensitive locations, and information security training and awareness; and
- requiring third parties to sign nondisclosure agreements (where applicable) before disclosing any RINCH confidential or trade secret information.

36. RINCH also protected its valuable RINCH Trade Secrets by filing patent applications on certain aspects thereof, wherein the information disclosed therein remains a secret until the publication of such patent applications.

37. For example, RINCH has sought patent protection for some of the compositions and methods related to RINCH Trade Secrets, including RINCH Liver Cancer Trade Secrets and RINCH Liver Fibrosis Trade Secrets. These compositions and methods are described in the following patent applications (collectively referred to as the "RINCH Patent Applications"):

- U.S. Application No. 15/515,570: “Compositions And Methods For Treating Hepatic Fibrosis” (“the ‘570 Application”), including any related applications;
- International Application No. PCT/US2016/054215: “Methods For Detecting Hepatic Fibrosis And Responsiveness To Therapy” (“the ‘215 PCT Application”), including any related applications such as the national phase applications filed in the United States, European Union, and China;
- Methods for Detecting and Treating Hepatic Cancers, U.S. Provisional Patent Appl. No. 62/795,446;
- A Novel Method for Monitoring and Treating Oral Cancer, U.S. Provisional Patent Appl. No. 62/795,441;
- A Novel Method for Monitoring Endometriosis and Associated Disorders, U.S. Provisional Patent Appl. No. 62/790,337; and
- Methods to Identify and Treat Cisplatin-Resistant Ovarian Cancer, U.S. Provisional Patent Appl. No. 62/790,928.

Defendant Yu Zhou

38. Defendant Zhou was hired at NCH in 2007 as a Post-doctoral Scientist in Dr. Besner’s research laboratory in the Center for Perinatal Research. Zhou worked on pre-clinical research studies in the area of intestinal injury and necrotizing enterocolitis, a disease primarily affecting premature infants and involving damage or death of the intestines.

39. On information and belief, Defendant Chen was generally knowledgeable about Defendant Zhou’s work with RINCH, as NCH’s public website, at least as of April of 2018, generally described Defendant Zhou’s work as:

Yu works for Dr. Gail Besner’s Lab. His research interests focus on the study of enteric nervous system pathophysiology in the development of necrotizing enterocolitis. He also has an interest in the discovery of blood born biomarkers for early diagnosis or prognostic evaluation of this devastating pediatric disease. In addition, he investigates the use of stem cells or stem cell-derived extracellular vesicles (exosomes) in the treatment or prevention of necrotizing enterocolitis.

See <http://www.nationwidechildrens.org/perinatal-people> (last accessed April 11, 2018).

40. At various times during the period of his employment, Defendant Zhou's work at RINCH was funded in part through at least the following Federal grants awarded to NCH/RINCH and Dr. Besner:

- "HB-EGF and Intestinal Ischemia/Reperfusion" (NIH Grant No. 5 R01GM061193-08);
- "Exosomes and HB-EGF in Stem Cell Mediated Therapy for Necrotizing Enterocolitis" (NIH Grant No. 1 R01GM113236 -01); and
- "Role of NO and Endothelin in Human NEC" (NIH Grant No. 1 RO1DK065306-04).

41. Defendant Zhou is a named co-inventor on U.S. Application No. 15/123,892: "Methods Of Delivering Heparin Binding Epidermal Growth Factor Using Stem Cell Generated Exosomes" ("the '892 Application"), along with Dr. Besner.

42. As alleged in more detail in ¶¶ 90 and 125 infra, at least Defendants Zhou and Chen filed two patent applications in China in 2016 relating to RINCH's liver cancer technology (the "Liver Cancer Patent Applications"), and two patent applications in China in 2017 and one International Patent Application in 2018 relating to RINCH's oral cancer technology (the "Oral Cancer Patent Applications") without RINCH's knowledge or consent.

Defendant Li Chen

43. Defendant Chen was hired at NCH in December 2007 as a Research Associate in Dr. Matthew Kennedy's laboratory in the Center for Molecular and Human Genetics. In September 2008, Defendant Chen transferred into the laboratory of Dr. Brigstock when grant funding for her position in Dr. Kennedy's lab expired. In Dr. Brigstock's laboratory, Defendant

Chen worked on various projects related to pancreatic disease, liver disease, exosomes, and miRNAs.

44. On information and belief, Defendant Zhou was generally knowledgeable of Dr. Chen's work with RINCH as Chen also generally described her work at RINCH on her LinkedIn public profile as:

Research Scientist

Jan 2015 – Present · 4 yrs 9 mos
Nationwide Children's Hospital

Research Scientist & Postdoctoral Scientist

Sep 2009 – Dec 2018 · 9 yrs 4 mos
Nationwide Children's Hospital

Identified mechanisms that account for the anti-fibrotic properties of exosomes in hepatocytes of healthy individuals. a) Identified miRs in hepatocyte exosomes from healthy mice that stimulate hepatocyte proliferation and suppress fibrogenic signaling in mouse hepatic stellate cells (HSC) in vitro and are anti-fibrotic in experimental liver fibrosis in vivo, b) Identified miRs in circulating exosomes from healthy humans that suppress fibrogenic signaling in human HSC in vitro, c) Established other functional effects of hepatocytes or serum exosomes on HSC or other hepatic cell types.

Explored proteomic and transcriptomic biomarkers in serum, urine and saliva for liver diseases. Established the diagnostic value of exosomal miR/mRNA profiling in liver fibrosis and liver cancer. a) Established fibrosis progression to cancer or reversion by miR/mRNA profiling of serum exosomes from HBV patients undergoing antiviral therapy, b) Established miR and mRNA profiles of liver-derived circulating exosomes.

Identified a novel mechanism of HSC regulation in which all components of a Twist-1-miR-214- connective tissue growth factor (CTGF) axis are exosomally shuttled to recipient HSC in which fibrogenic signaling was then modulated.

Elucidated the mechanisms by which exosomal transfer of miR-214 is a paradigm for the regulation of CCN2-dependent fibrogenesis and identifies fibrotic pathways as targets of intercellular regulation by exosomal miRs.

Identified the mechanism by which ethanol-induced CTGF transcription is dependent on TGF- β 1 response elements in the CTGF promoter.

See <https://www.linkedin.com/in/chen-li-4a75a330/> (last accessed September 18, 2019).

45. At various times during the period of her employment, Defendant Chen's work at RINCH was funded in part through at least the following Federal grants awarded to NCH/RINCH and Dr. Brigstock:

- "CTGF in pancreatic stellate cell-mediated fibrogenesis" (NIH Grant No. RO1 AA015554)
- "Mechanisms of CTGF-induced Liver Disease" (NIH Grant No. RO1 AA016003);
- "MicroRNA regulation of CTGF in hepatic stellate cells" (NIH Grant No. RO1 AA021276);
- "Exosome platforms for assessment and therapy of chronic liver disease" (NIH Grant No. R21 AA023626);
- "Exosomes in alcoholic liver disease" (Grant No. 1P50AA024333);
- "Hepatocyte Exosomes for Therapy of Ethanol-Induced Liver Injury (NIH Grant No. R21 AA025974)

46. Defendant Chen is a named co-inventor along with Brigstock on RINCH's '570 Application and RINCH's '215 PCT Application.

47. Defendant Chen resigned her position with RINCH effective January 31, 2018 to take a position with University of California San Diego ("UCSD") in the Human Liver Cell Lab. However, on information and belief, as of on or about October 2018, Defendant Chen is no longer employed by UCSD.

Defendants Yu Zhou and Li Chen's Employment Agreements

48. During the course of their employment with RINCH, both Defendants Zhou and Chen entered into various employment agreements with NCH and/or RINCH with respect to employee codes or standards of conduct and maintaining and protecting RINCH's confidential and

proprietary information and intellectual property such as the RINCH Trade Secrets (collectively referred to as the “Employment Agreements”).

49. For example, on or about December 26, 2007, Defendant Zhou signed NCH’s Confidentiality Agreement. The Confidentiality Agreement requires that “Confidential Information may only be used or discussed when required to perform NCH duties.” Confidential Information is specified in the Confidentiality Agreement as including but not limited to “patient information or medical records, employee information or records, and Nationwide Children’s business and financial information, in any form (verbal, paper, electronic).”

50. Defendant Chen signed NCH’s Confidentiality Agreement on or about January 8, 2008.

51. NCH has a Patents and Copyright Policy that sets forth its policy with respect to its intellectual property:

Nationwide Children’s Hospital, Inc. (NCHI) or one of its subsidiaries (“collectively “Institution”) owns all Intellectual Property, including technical discoveries, inventions and non-academic work authored, developed or invented by Institution’s employees, medical staff members, affiliated faculty (regular or auxiliary), trainees or any person using its facilities, unless otherwise stated in writing by duly authorized representatives of the corporation.

Defendants Zhou and Chen were aware of NCH’s Patents and Copyright Policy at least by way of their receipt and written acknowledgement of NCH’s Employee Handbook. Defendant Zhou signed an Acknowledgment of NCH’s Employee Handbook in December 2007. As employees of RINCH, Defendants Zhou and Chen were obligated to comply with the terms of the Patents and Copyright Policy, which also included an obligation for Defendants to disclose any inventions to RINCH: “if an Employee believes that he/she has developed or created a patentable invention, the

Employee should contact the Office of Technology Commercialization prior to any publication or other public disclosure.”

52. NCH also has a Research Conflict of Interest Policy, which Defendants Zhou and Chen were aware of at least by way of their receipt of NCH’s Employee Handbook. The purpose of the Research Conflict of Interest Policy “is to ensure an individual’s significant financial interests do not jeopardize the objectivity of research conducted at Nationwide Children’s Hospital, Inc.” This policy requires individuals participating in research at NCH to timely disclose financial interests, patents, patent applications, copyrights, royalties and/or licensing payments, and sponsored travel to allow RINCH to manage and/or eliminate the conflict of interest.

53. An additional RINCH policy (Research-Administration-011-00 Faculty and Employees Engaged in Research and Paid for Consulting/Other Activities, or as referred to herein “Outside Activities Policy”) likewise provides a process by which RINCH can approve outside activities in order to avoid conflicts of interest and to avoid conflicts of commitment. Neither Defendant Zhou nor Defendant Chen sought approval from RINCH under this policy for the accused of activities in this Complaint.

54. Defendants Zhou and Chen were aware of and agreed to be bound by the Employment Agreements. As representative examples:

- Defendants Zhou and Chen consented to the Confidentiality and Security Agreement;
- Defendants Zhou and Chen consented to the Patents and Copyright Policy and the Research Conflict of Interest Policy;
- Defendant Chen signed a Certification Related to NCH’s Corporate Integrity Program on or about January 8, 2008; and
- On information and belief, Defendants Zhou and Chen were aware of the Outside Activities Policy.

55. Further, on Friday, July 14, 2017, Defendant Chen emailed the following text regarding NCH's assignment and prompt disclosure policies to the email addresses chenliandzhouyu@gmail.com and yuzhou414@gmail.com:

ASSIGNMENTS

As stated in the hospital policy, all technical discoveries, inventions, and non-academic work authored, developed, or invented by any person employed by Nationwide Children's Hospital, Inc. or its subsidiaries or by those using its facilities, is considered property of the hospital. An inventor is defined as any member of the medical staff of Nationwide Children's Hospital and/or OSU faculty member using the facilities at Nationwide Children's Hospital. This definition also encompasses all employees of Nationwide Children's Hospital during their regular course of employment, those engaged in activities involving research or clinical investigation, all housestaff, appointees, professional students, consultants and other personnel engaged in basic or applied research, testing activities or service programs at the institution.

Patents and copyrights issued or acquired as a result of or in connection with administration, research, or other educational activities conducted by members of Nationwide Children's Hospital, Inc. and supported directly or indirectly by funds administered by Nationwide Children's Hospital, Inc. or The Research Institute at Nationwide Children's Hospital, regardless of the source of such funds, and all royalties or other revenues derived therefrom shall be the property of Nationwide Children's Hospital, Inc. Nationwide Children's Hospital, Inc. reserves the right to retain, assign, license, transfer, sell or otherwise dispose of, in whole or in part, any and all rights to, interests in, or income from any such discoveries, inventions or patents, except in cases of sponsored research projects where the terms of the research contract specifically require the assignment of patent or other rights to the sponsor.

PROMPT DISCLOSURE

Prompt reporting is the means by which an investigator communicates with the technology transfer staff about the direction and status of his/her research. It can start with a simple conversation and culminate in the filing of a formal invention disclosure form. The technology transfer staff can help the investigator assess the technology and its eventual application in a commercial setting. Based on these discussions, the investigator and Patents and

Copyrights Committee (PCC) can jointly decide whether to file an invention disclosure form.

As an employee of Nationwide Children's Hospital, we are guided by the Patents and Copyrights Policy, which includes prompt reporting. In addition, recipients of external research funding have agreed to certain terms of the funding agency. For federal agencies in regards to intellectual property, the investigator is responsible to 'disclose promptly in writing' to the PCC each subject invention made under the contract in order for The Research Institute at Nationwide Children's Hospital to comply with the disclosure requirements to the federal government, file a patent application, and establish the government's rights. The technology transfer office relies on the investigator to stay in close communications to help fulfill this requirement.

The invention disclosure form can be obtained online or by contacting Anna Ursu. Complete the form and return it to the Office of Technology Commercialization. Acknowledgement of a complete disclosure or the need for additional information will occur within 1 week of receipt. Once a complete disclosure form is submitted, the Business Development staff will perform a technical and marketing evaluation through patent and literature searches to determine whether the invention is patentable or copyrightable. The timeline to complete this initial review is approximately 3-5 weeks. The evaluation will then be presented to the PCC for a decision how to proceed with the disclosure.

It is advisable to start this process approximately three months BEFORE the date of any public presentation or publication. Following public disclosure, an invention is no longer eligible for a foreign patent and US patent timelines are significantly shortened.

The success of the technology transfer process begins with prompt disclosure of an invention. As creator and developer of the invention, the investigator will also be key to transferring invention information to the patent lawyer, identification of potential partners, discussions with industry, and informally the monitoring of patent infringement. The technology transfer office will work with the inventor and all outside parties during each step in this process.

RINCH's Awareness of Defendants' Misconduct

56. Around November of 2017, RINCH received an anonymous letter dated November 2, 2017 via NCH's Corporate Compliance Office reporting alleged misconduct, intellectual

property violations, and ethical violations involving two NCH employees working at RINCH. In that letter, it was alleged that Defendant Zhou (working under Dr. Besner) and his wife Defendant Chen (working under Dr. Brigstock) had set up a company in China in 2015 known as Beijing JieTeng Biotech Co. Ltd. (“Beijing GenExosome”).

57. The November 2, 2017 letter further alleged that over the course of the following two years (from 2015), Defendant Zhou had filed four patent applications in China on topics related to exosome miRNA and liver diseases, likely adopting the approach and concepts that Dr. Brigstock previously developed in his lab, and which Defendant Chen had worked on in the Dr. Brigstock’s lab.

58. In response to the letter, and following Defendant Chen’s departure from RINCH in January of 2018, RINCH recovered Chen and Zhou’s hard drives, as well as the hard drives of lab computers known to be used by Defendants Chen and Zhou, as well as other RINCH employees in Drs. Besner and Brigstock’s labs. These hard drives are collectively referred herein to as the “Defendant Hard Drives.”

Beijing JieTeng Biotech Co. Ltd.

59. On information and belief and without RINCH’s knowledge, Defendants Zhou and Chen established a company in China sometime in 2015 known as Beijing GenExosome.

60. The technology and mission of Beijing GenExosome is described in a press release dated October 30, 2017:

Beijing GenExosome’s research systems are designed to be used by researchers for biomarker discovery and clinical diagnostic development, and the advancement of targeted therapies. Currently, research kits and services are available to isolate exosomes or extract exosomal RNA/protein from serum/plasma, urine and saliva samples. Beijing GenExosome is seeking to decode proteomic and genomic alterations underlying a wide-range of pathologies, thus allowing for the introduction of novel non-invasive “liquid biopsies.” Its mission is focused on diagnostic advancements in the

fields of oncology, infectious diseases and fibrotic diseases, and discovery of disease-specific exosomes to provide disease origin insight necessary to enable personalized clinical management.

See <https://markets.businessinsider.com/news/stocks/avalon-globocare-acquires-leading-beijing-exosome-technology-company-1006215395> (last accessed September 18, 2019).

61. On information and belief, Beijing GenExosome's research systems, kits, and services were derived from RINCH Trade Secrets because they relate to information and know-how acquired by Defendants Zhou and Chen while employed at RINCH in the fields of oncology, infectious diseases, and fibrotic diseases.

62. Defendants Zhou and Chen did not disclose their activities related to the formation of Beijing GenExosome to RINCH or obtain RINCH's consent to engage in said activities.

63. On information and belief, in China, Defendants Zhou and Chen not only claim the RINCH Trade Secrets—but also claim RINCH's publicly available, yet still proprietary information and intellectual property—as their own without attribution to RINCH, Drs. Besner or Brigstock, and without authorization or consent from RINCH.

64. Notwithstanding their Employment Agreements, on information and belief, at least through July of 2019, Defendants Zhou and Chen were in the business of developing, marketing, and patenting exosome technologies for the diagnosis or treatment of liver cancer and oral cancer based upon and derived from the RINCH Trade Secrets.

65. On information and belief, Defendants Zhou and Chen's development, marketing, and patenting activities used, incorporated, and/or were derived from RINCH Trade Secrets, confidential information, or the subject matter of patent applications owned by RINCH at the time of Defendants Zhou and Chen's use, incorporation, and/or derivation.

Avalon Globocare Corp.

66. On information and belief, Avalon purports to be a healthcare management provider and biotechnology developer that is dedicated to integrating and managing global healthcare resources, empowering high-impact biomedical innovation and technologies, as well as engaging in bio-venture investment.

67. On information and belief, Avalon was aware of Defendants Zhou and Chen's work at RINCH and worked with them, and potentially others, to set up companies in China and/or the United States in order to acquire, develop, exploit, and commercialize the RINCH Trade Secrets.

68. For example, a press release dated October 30, 2017 highlights Avalon's acquisition of Beijing GenExosome and pursuit of this business (which is based upon and derived from the RINCH Trade Secrets):

Avalon GloboCare Corp. (OTCQB: AVCO), a leading global developer of cell-based technologies, announced today that its majority-owned subsidiary GenExosome Technologies Inc. (GenExosome) acquired 100% of the outstanding capital stock of Beijing Jieteng (Beijing GenExosome) Biotech Co. Ltd. Concurrently, GenExosome entered into and closed an Asset Purchase Agreement with Dr. Yu Zhou, CEO of GenExosome Beijing, pursuant to which GenExosome acquired all assets, including all intellectual property, patents and patent applications held by Zhou pertaining to the business of researching, developing and commercializing exosome technologies. Additional details of the transaction are available in the Company's form 8-K filed with the Securities & Exchange Commission on October 27, 2017, and is available at www.sec.gov (<http://www.sec.gov>).

"Exosome-related technology and applications have been developing rapidly the past few years and are expected to grow exponentially," said Dr. David Jin, President and CEO of Avalon GloboCare, as well as Co-CEO of GenExosome. "This joint venture aligns with Avalon's mission to foster and accelerate clinical translation of innovative and transformative biotechnology. We believe this acquisition will help further establish Avalon's leading role in the fields of liquid biopsy, precision medicine and regenerative medicine," added Dr. Jin.

See <https://markets.businessinsider.com/news/stocks/avalon-globocare-acquires-leading-beijing-exosome-technology-company-1006215395> (last accessed September 18, 2019).

69. Defendants' use of and benefit from RINCH's Trade Secrets is reflected by at least Defendant Avalon's publicized work and/or collaborations with third parties in the exosome technology area:

- Avalon's January 30, 2018 press release ("Avalon GloboCare Forms Strategic Partnership with Major Biomedical Enterprise Da An Gene") refers, *inter alia*, to: "'This strategic partnership with Da An Gene will significantly accelerate our product development and commercialization in the fields of liquid biopsy and in vitro diagnostics,' said David Jin, M.D., Ph.D., President and CEO of Avalon GloboCare, as well as co-CEO of its subsidiary GenExosome Technologies Inc. 'The specialty of Da An's genomic sequencing and profiling platform, in combination with our proprietary exosome isolation system and clinical expertise in regenerative medicine, will further establish Avalon's leading role in precision and regenerative medicine,' added Dr. Jin."
- Avalon's February 13, 2018 press release ("Avalon GloboCare Subsidiary GenExosome Expands Operations into the United States") refers, *inter alia*, to: "Avalon GloboCare Corp.(OTCQB: AVCO), a leading global developer of cell-based technologies, announced today that its majority-owned subsidiary, GenExosome Technologies Inc. (GenExosome), has formally launched its U.S. operations, with plans to market and distribute its proprietary Exosome Isolation Systems from its new headquarters in Ohio. The Company also announced plans to develop proprietary diagnostic and therapeutic products leveraging its exosome technology. The Company has already begun hiring personnel for marketing and customer fulfilment."
- Avalon's April 24, 2018 press release ("Avalon GloboCare Forms Joint Laboratory with Top-Ranked Hospital in Shanghai for Regenerative Exosomes") refers, *inter alia*, to: "'This strategic partnership with the Shanghai Ninth People's Hospital is the first of its kind in establishing an innovative, state-of-the-art joint laboratory in regenerative exosomes,' said David Jin, M.D., Ph.D., President and CEO of Avalon GloboCare, as well as co-CEO of its subsidiary GenExosome Technologies Inc. 'This laboratory will combine Avalon's proprietary exosome isolation technology with SNPH's clinical expertise to accelerate the development of diagnostic and therapeutic applications particularly in the areas of plastic/reconstructive surgery, wound healing, skincare, and exomic bioinformatics. This joint endeavor will further establish Avalon's leading role in precision and regenerative medicine,' added Dr. Jin."
- Avalon's October 9, 2018 press release ("Avalon GloboCare Teams Up with Weill Cornell Medicine to Co-develop Standardization of cGMP-Grade Exosome

Isolation and Application of Tissue-Specific Exosomes") refers, *inter alia*, to: "This co-development program will focus on two main objectives: 1) standardization of cGMP-grade exosome isolation from human endothelial cells, essential for vascular health and organ regeneration; and 2) identification and isolation of tissue-specific exosomes for liquid biopsy and clinical use. A material transfer agreement will accompany this announcement to facilitate and authorize the use of Genexosome's isolation system by Weill Cornell. 'Identification and isolation of tissue-specific exosomes is considered by many as the "Holy Grail" is this area. This co-development and standardization initiative with Weill Cornell has further enhanced the global recognition, intellectual property, as well as our leading role in this industry sector,' stated Yu Zhou, M.D., Ph.D., Founder and Co-CEO of Genexosome Technologies, Inc. 'This strategic co-development endeavor will synergize Genexosome Technologies' top-rated isolation platform with Weill Cornell's world-class cGMP cellular therapy/cell-derived product processing facility to accelerate innovative exosome technology development, as well as standardization in clinical-grade exosome bio-production process,' stated David Jin, M.D., Ph.D., CEO and President of Avalon GloboCare Corp. and Co-CEO of its subsidiary, Genexosome Technologies Inc. 'We are very proud to commence this endeavor with an overarching goal of integrating premium research and clinical resources to achieve standardized, safer, and more effective operating tools and procedures in the fields of exosome-based liquid biopsy, cancer diagnostics and regenerative medicine,' added Dr. Jin."

GenExosome Technologies, Inc.

70. On information and belief, and according to Avalon's 8-K filing (dated October 20, 2017), Avalon formed GenExosome, a Nevada corporation, in July 2017.

71. On information and belief, and according to Avalon's 8-K filing (dated October 20, 2017), on October 25, 2017, GenExosome entered into, and closed, an Asset Purchase Agreement with Defendant Zhou wherein Avalon acquired all of the assets, including all intellectual property held by Defendant Zhou pertaining to the business of researching, developing, and commercializing exosome technologies, including the Defendants' Patent Applications.

72. Schedule 1.1(a) to the October 25, 2017 Asset Purchase Agreement between Defendants Zhou and GenExosome, which identifies the Defendants' Patent Applications as the acquired assets, further describes the applications as "CURRENT OWNED INTELLECTUAL PROPERTY in China (to be filed in the USA)." Such notation suggests that Defendants Zhou and

Chen have already, or intend, to file patent applications based on the same technology in the United States.

73. On information and belief, because of the timing of at least some of Defendants' Patent Applications in China, they may be currently held in secret by the Chinese Patent Office and have not yet been published. Defendants' published Chinese Patent Applications include CN 2016 1 0675107.5, CN 2016 1 0675110.7, CN 2017 1 0330835.7, and CN 2018 1 0444172.6.

74. Likewise, any corresponding patent applications that Defendants Zhou and Chen may have filed in the United States or internationally would also be held in secret by the U.S. Patent Office or International Bureau, respectively, for an approximate eighteen months from the priority date of any such applications. Defendants' published International Patent Application includes PCT/CN2018/086347.

75. In consideration of the assets (namely, the Defendants' Patent Applications), GenExosome agreed to Defendant pay Zhou \$876,087 in cash no later than November 24, 2017, transfer 500,000 shares of common stock of Avalon to Defendant Zhou no later than November 24, 2017, and issue Defendant Zhou 400 shares of common stock of GenExosome no later than November 24, 2017.

76. As a result of these transactions, Avalon holds 60% of GenExosome stock, and Defendant Zhou holds 40% of GenExosome stock, and was described as "Co-CEO" in the Avalon press release dated November 1, 2017. On information and belief, through July of 2019, Defendant Zhou held the title of Co-CEO.

77. Defendant Zhou described GenExosome's acquisition and the proprietary technology in an Avalon press release dated October 30, 2017:

Our proprietary exosome isolation system enables us to capture exosomes quickly and efficiently from a tiny volume of any bodily

fluids. Known as ‘liquid biopsies,’ we believe our system is transformative to the industry as the technology will allow for the diagnosis of certain diseases that were previously impossible to accurately determine due to the limited availability of patient samples. Our studies have shown that our isolation system is more efficient and effective than what is available today, with faster extraction and higher purity results. We are thrilled at the opportunities presented through this acquisition.

Beijing GenExosome’s research systems are designed to be used by researchers for biomarker discovery and clinical diagnostic development, and the advancement of targeted therapies. Currently, research kits and services are available to isolate exosomes or extract exosomal RNA/protein from serum/plasma, urine and saliva samples. Beijing GenExosome is seeking to decode proteomic and genomic alterations underlying a wide-range of pathologies, thus allowing for the introduction of novel non-invasive “liquid biopsies.” Its mission is focused on diagnostic advancements in the fields of oncology, infectious diseases and fibrotic diseases, and discovery of disease-specific exosomes to provide disease origin insight necessary to enable personalized clinical management.

See <https://markets.businessinsider.com/news/stocks/avalon-globocare-acquires-leading-beijing-exosome-technology-company-1006215395> (last accessed September 18, 2019).

78. At the time Defendants Chen and Zhou filed the Liver Cancer Patent Applications and the Oral Cancer Patent Applications, Defendants Chen and Zhou were still employed by RINCH and therefore were under contractual obligation to assign any such inventions disclosed therein to RINCH and to obtain approval with respect to any conflicts and/or outside activities pursuant to their Employment Agreements.

79. At the time Defendants Chen and Zhou filed the Liver Cancer Patent Applications and the Oral Cancer Patent Applications, on information and belief, GenExosome and Avalon were aware that Defendants Chen and Zhou were still employed by RINCH.

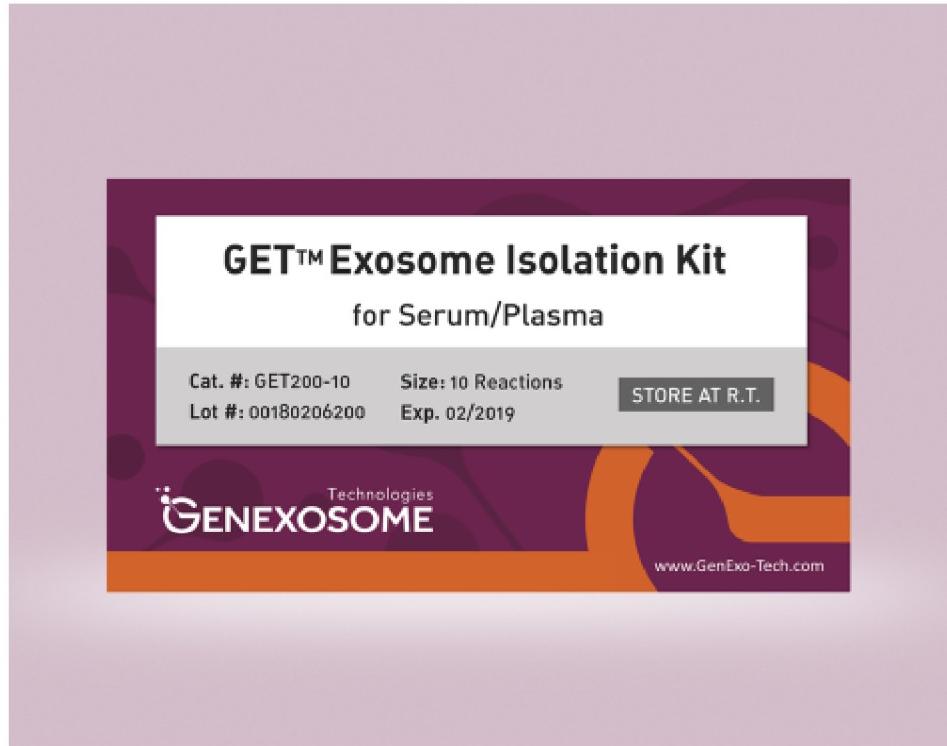
80. On information and belief, prior to its involvement with Defendants Chen and/or Zhou, GenExosome and Avalon were not, and had never been, in the business of developing compositions and methods of exosome-based diagnostic and therapeutic methods for various

diseases including intestinal disorders and liver disorders such as liver fibrosis, alcoholic liver disease, chronic liver disease, and liver cancer.

81. Defendants' use of and benefit from RINCH's Trade Secrets is reflected by at least Defendant GenExosome's offerings at least as of April of 2018 of the following "Exosome Products" and "Exosome Services":

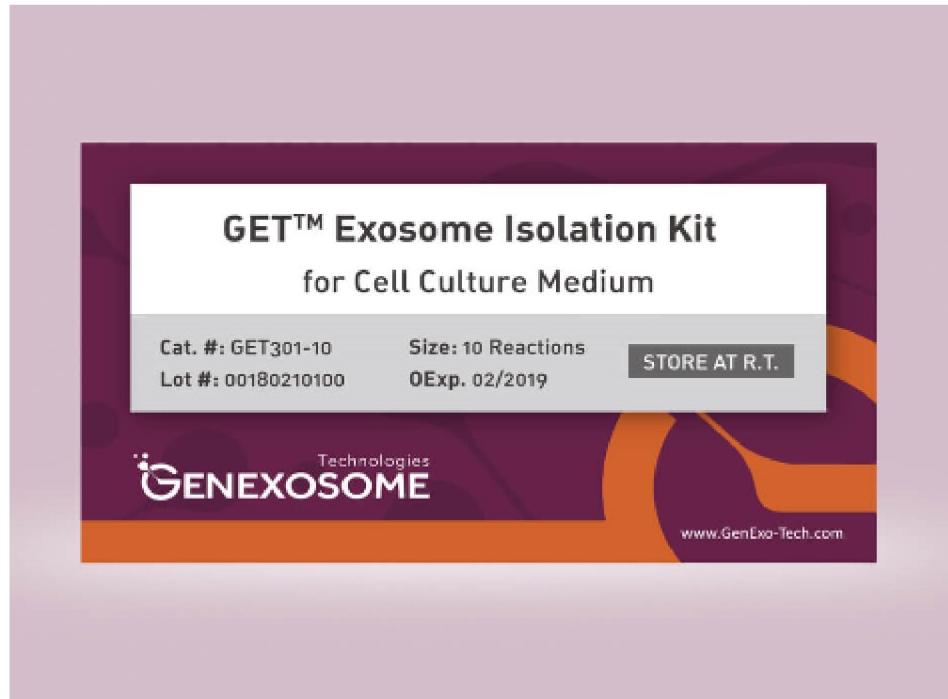
Exosome Products (see www.genexo-tech.com²):

- GET™ "ONE Drop" Exosome Isolation Kit (for Serum/Plasma)

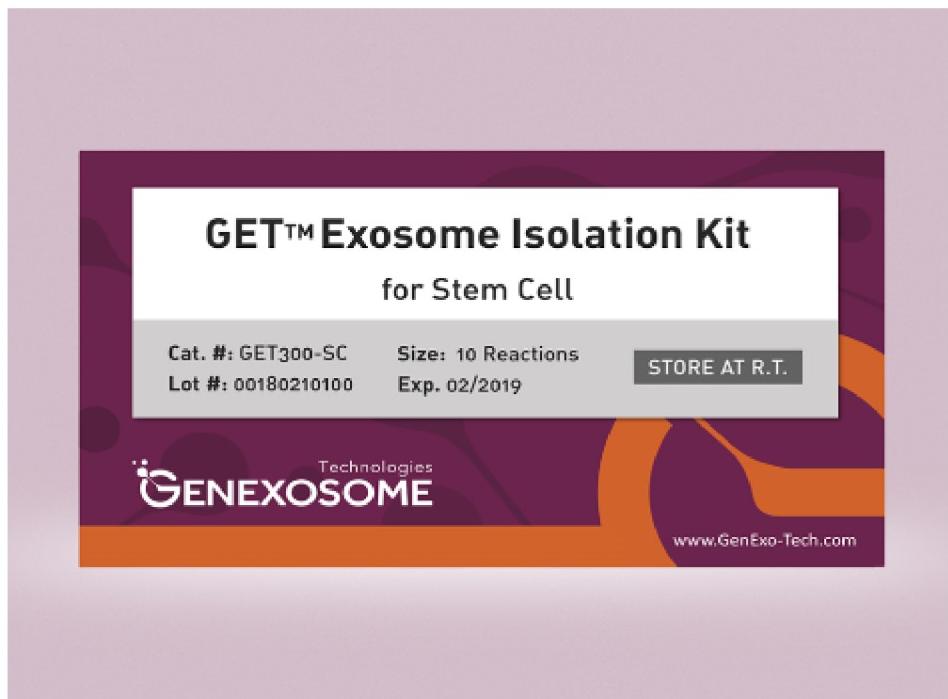


² As of September 18, 2019, this website was taken down. At least as of April of 2018, the GenExosome website displayed Exosome Product information as shown herein.

- GET™ Exosome Isolation Kit (for Cell Culture Medium)



- GET™ Exosome Isolation Kit (for Stem Cell)



Exosome Services (see www.genexo-tech.com³):

- Exosome Isolation and NTA Analysis
- Exosome Mimic miRNAs Fluorescence Labeling
- Exosome FACS Sorting



Exosome Isolation and NTA Analysis

Our novel technique enables fast, easy and efficient enrichment of intact exosomes from different types of body fluids. Nanoparticle Tracking Analysis phenotypes, doses exosomes with high sensitivity and precision.

Exosome Mimic miRNAs Fluorescence Labeling

Exosome Mimic microRNAs Fluorescence Labeling Kit labels exosomal microRNA simply, reproducibly, and uniformly with a detectable fluorescent marker.

Exosome FACS Sorting

Exosome FACS sorting uses light scattering properties of vesicles to sort individual exosomes using fluorescent labels.

82. Thus, Defendants have developed methods and compositions for use of exosomes, which Defendants are commercializing and patenting, and which include the unauthorized reliance upon, use of, and disclosure of, RINCH's Trade Secrets, confidential, and/or proprietary information, or other intellectual property, as reflected by the data sheets and supporting materials that can be assessed at GenExosome's website at least as of April 2018, with respect to these Exosome Products and Exosome Services.

83. For example, Defendant GenExosome's website advertised multiple products and services related to exosome isolation, including a "GETTM One Drop Exosome Isolation Kit," which is related to, and was developed from RINCH's Trade Secrets. The "GETTM One Drop Exosome Isolation Kit" product promises the ability to "enrich exosomes from one drop of blood,"

³ As of September 18, 2019, this website was taken down. At least as of April of 2018, the GenExosome website displayed Exosome Services information as shown herein.

which includes, according to the advertisement, the ability to isolate exosomes from 20 microliters of serum/plasma.

84. The complained-of acts were done without RINCH's authorization, knowledge, permission, or license despite the fact that at least Defendants Zhou and Chen were aware of RINCH policies regarding confidential information, intellectual property (including the RINCH Trade Secrets), conflicts of interest, and outside activities.

Defendants' Activities Related to Liver Cancer

85. On information and belief, at least Defendant Chen performed research investigating therapeutic and diagnostic applications of exosomes and miRNAs in liver cancer while employed at RINCH and while using RINCH facilities, equipment, reagents, RINCH funds and/or federal funds granted to RINCH.

86. On information and belief, through her involvement with RINCH's liver cancer research, Defendant Chen was aware of the close relationship between liver cancer and liver fibrosis. For example, the Defendant Hard Drives contain an article describing the link between liver fibrosis and liver cancer: De Minicis, S. *et al.*, "Cellular and molecular mechanisms of hepatic fibrogenesis leading to liver cancer" (2012) *Transl. Gastrointest. Cancer*, 1: 88-109. miRNA-33b is a miRNA important in therapeutic and diagnostic applications for liver cancer.

87. On information and belief, at least Defendant Chen discovered the significance of miRNA-33b while employed at RINCH and while using RINCH facilities, equipment, reagents, RINCH funds and/or federal funds granted to RINCH.

88. In 2014, as part of her authorized work with Dr. Brigstock, Chen conducted miRNA profiling experiments at RINCH that assayed, among other things, levels of miRNA-33b.

89. A draft of Chen's curriculum vitae dated September 18, 2017 describes her work with liver cancer from "2009-Present" as a scientist at RINCH under the heading "Professional Experience":

Explored proteomic and transcriptomic biomarkers in serum, urine and saliva for liver diseases. Established the diagnostic value of exosomal miR/mRNA profiling in liver fibrosis and liver cancer. a) Established fibrosis progression to cancer or reversion by miR/mRNA profiling of serum exosomes from HBV patients undergoing antiviral therapy, b) Established miR and mRNA profiles of liver-derived circulating exosomes.

90. On information and belief, at least Defendants Zhou and Chen filed the following patent applications in China in 2016 relating to RINCH's liver cancer technology and the RINCH Liver Cancer Trade Secrets without RINCH's knowledge or consent (collectively, the "Liver Cancer Patent Applications"), including without limitation:

- Chinese Application No. CN 2016 1 0675107.5 for "miRNA marker related to liver cancer with exosome source and application of miRNA marker"; and
- Chinese Application No. CN 2016 1 0675110.7 for "Exosome-sourced miRNA-33b related to liver cancer and application thereof."

91. On information and belief, at least Defendants Zhou and Chen filed Chinese Patent Application No. CN 2016 1 0675107.5 on August 17, 2016, which published on March 6, 2018 under Publication No. CN 107760781 A.

92. The subject matter of Chinese Patent Application No. CN 2016 1 0675107.5 relates to the use of miRNA-46a, an exosomal miRNA, as a biomarker to diagnose liver cancer.

93. The subject matter of Chinese Patent Application No. CN 2016 1 0675107.5 also relates to kits for isolating exosomes from patient samples.

94. On information and belief, at least Defendants Zhou and Chen filed Chinese Patent Application No. CN 2016 1 0675110.7 on August 17, 2016, which published on March 6, 2018 under Publication No. CN 107760782 A.

95. The subject matter of Chinese Patent Application No. CN 2016 1 0675110.7 relates to the use of miRNA-33b, an exosomal miRNA, as a biomarker to diagnose liver cancer.

96. The subject matter of Chinese Patent Application No. CN 2016 1 0675110.7 also relates to kits for isolating exosomes from patient samples.

97. On information and belief, the subject matter of one or more of the Liver Cancer Patent Applications was derived in whole or in part on work performed at RINCH by Drs. Brigstock and Besner and/or one or more of Defendants Zhou and Chen while at RINCH.

98. On information and belief, the subject matter of one or more of the Liver Cancer Patent Applications was researched and developed by Drs. Brigstock and Besner, or Defendants Zhou or Chen, while at RINCH and while using RINCH funds and/or federal funds granted to RINCH.

99. On information and belief, Defendants Zhou and Chen filed the Liver Cancer Patent Applications at a time when at least one of Defendants Zhou and Chen was employed at RINCH.

100. Defendants Zhou and Chen's filing of the Liver Cancer Patent Applications was in contravention of their obligations under their respective Employment Agreements.

101. Defendants Zhou and Chen filed the Liver Cancer Patent Applications without the knowledge or consent of RINCH.

102. On information and belief, Defendants Zhou and Chen embarked on a scheme to misappropriate the RINCH Liver Cancer Trade Secrets by setting up companies in China and/or

the United States in order to obtain ownership of the Liver Cancer Patent Applications and underlying technology misappropriated from RINCH.

Defendants' Activities Related to Oral Cancer and Oral Leukoplakia

103. miRNA-185 is a miRNA important in therapeutic and diagnostic applications for oral cancer and oral leukoplakia.

104. On information and belief, one or more of Defendants Zhou and Chen, along with Zachary Zhou (upon information and belief, Defendant Zhou's son) performed research investigating therapeutic and diagnostic applications of exosomes and miRNAs in oral cancer while employed at RINCH and while using RINCH facilities, equipment, reagents, RINCH funds and/or federal funds granted to RINCH.

105. On information and belief, at least Defendants Zhou and Chen discovered the significance of miRNA-185 while employed at RINCH and while using RINCH facilities, equipment, reagents, RINCH funds and/or federal funds granted to RINCH.

106. In 2014, as part of her authorized work with Dr. Brigstock, Defendant Chen conducted exosome miRNA profiling experiments at RINCH that assayed, *inter alia*, levels of miRNA-185.

107. In February 2014, Defendant Zhou ordered "hsa-miR-185 miRCURY LNA™ Detection probe," ("Detection Probe") from Exiqon A/S, which on information and belief was obtained using RINCH funds and/or federal funds granted to RINCH.

108. On information and belief, Defendant Zhou shipped the Detection Probe to the following RINCH address:

Nationwide Children's Hospital
700 Children's Dr.
WA2111
Columbus, OH 43205

109. On information and belief, at least Defendant Chen used the Detection Probe to conduct oral cancer research at RINCH, and while using RINCH facilities, equipment, reagents, and/or federal funds granted to RINCH.

110. On information and belief, Defendant Chen conducted scientific experiments on or about October 4, 2015; December 15, 2015; January 14, 2016; January 15, 2016; and February 23, 2016 at RINCH and while using RINCH facilities, equipment, reagents, RINCH funds and/or federal funds granted to RINCH. On information and belief, these experiments were aimed at studying miRNAs and exosomes involved in oral cancer.

111. On information and belief, during the summer of 2016, Zachary Zhou conducted research (at the direction of Defendants Zhou and/or Chen) at RINCH and using RINCH facilities, equipment, reagents, RINCH funds and/or federal funds granted to RINCH.

112. On information and belief, Zachary Zhou's research used, relied upon, and/or related to RINCH's oral cancer technology and RINCH's Oral Cancer Trade Secrets.

113. Zachary Zhou (at the direction of Defendants Zhou or Chen) performed oral cancer research without RINCH's knowledge or consent.

114. On information and belief, at least Defendant Chen and Zachary Zhou publicly disclosed RINCH's oral cancer technology and RINCH's Oral Cancer Trade Secrets at the International Society for Extracellular Vesicles ("ISEV") Annual Meeting in Toronto, Canada, held May 18-21, 2017 without RINCH's knowledge and consent.

115. On information and belief, at least Defendant Chen and Zachary Zhou presented a poster containing RINCH's oral cancer technology and RINCH's Oral Cancer Trade Secrets on May 20, 2017 at ISEV's Annual Meeting without RINCH's knowledge and consent.

116. Defendant Chen and Zachary Zhou are listed as co-authors of ISEV poster abstract number LBP.48 entitled “Characterization of saliva exosomes and exosomal microRNAs in patients with oral leukoplakia.” The LBP.48 abstract was published on or about May 15, 2017 and describes research related to exosomes in patients with oral leukoplakia:

Introduction: Oral leukoplakia (OLK) is the most common premalignant disorder of the oral mucosa. Although histopathological analysis of biopsies showed that OLK-associated epithelial dysplasia is an important predictive factor of malignant transformation, saliva biomarkers to predict oral cancer development are lacking. Exosomes are nano-sized vesicles that are shed by producer cells and released into body fluids including saliva. Exosomes contain a complex mixture of microRNAs, mRNAs and proteins from the cell of origin, making them an ideal source for biomarker discovery and diagnostic development. Our goal was to characterize saliva exosomes and profile their microRNAs from patients with OLK, epithelial dysplasia and oral cancer.

Methods: Diagnosis of OLK, epithelial dysplasia or oral cancer was made on oral mucosal biopsies. Two ml whole-saliva from patients or normal individuals was collected, and exosomes were isolated. The concentration of exosomes was measured with Nanosight LM10 Instrument. Saliva exosomes carried cancer associated microRNAs were assessed using quantitative PCR. The expression of miR-185 was further evaluated by in situ hybridization (ISH) in oral mucosal specimens resected from patients with OLK, dysplasia or cancer.

Results: The patients with epithelial dysplasia has significantly higher concentration of saliva exosomes compared to OLK or normal control (mean 1.74 folds), while saliva exosome concentration in oral cancer patients was significantly decreased (mean 4.21 folds). The changes of exosomal microRNA levels in epithelial dysplasia or oral cancer include upregulation of miR-185, miR-200b, miR-29b, miR-409 and down regulation of miR-21, miR-320, and miR-486, with miR-185 demonstrating highest relative fold-changes in epithelial dysplasia and oral cancer compared to oral leukoplakia. ISH analysis confirmed remarkably increased expression of miR-185 in epithelial dysplasia and oral cancer patients compared to OLK patients.

Summary/Conclusion: Dynamic changes occur in saliva exosome concentration and exosomal microRNA content from epithelial dysplasia and oral cancer patients. Quantification of saliva exosome or their carried microRNAs may serve as ideal biomarkers in cancer risk assessment in oral leukoplakia patients.

117. On information and belief, Defendant Chen and Zachary Zhou produced at least some of the oral cancer data described in the LBP.48 abstract while using RINCH facilities, equipment, reagents, RINCH funds and/or federal funds granted to RINCH.

118. The LBP.48 abstract lists Defendant Chen's affiliation as "The Research Institute at Nationwide Children's Hospital, Columbus, OH" and Zachary Zhou's affiliation as "Columbus Academy, Ohio, USA."

119. On information and belief, on or about May 16, 2017, Defendant Zhou sent an email to "Ms. Lange" requesting permission for Zachary Zhou's upcoming absence from school to attend the ISEV conference in Toronto:

Ms. Lange,

I would like to bring your attention that my son Zachary Zhou, studying in grade 11 in CA, will take two days absence from school. Zach studied as an intern last summer in Nationwide Children's Hospital and he coauthored an abstract entitled "Characterization of saliva exosomes and exosomal microRNAs in patients with oral leukoplakia", He was invited to attend and present his work in International Society of Extracellular Vesicles (ISEV) 2017 Annual Conference in Toronto, Canada during May 18th-May 21.

120. On information and belief, "Ms. Lange" is Jennifer Lange, an employee (at least as of the May 16, 2017 date) of Columbus Academy, a school attended by Zachary Zhou.

121. On information and belief, Defendant Chen used RINCH oral cancer technology and RINCH Oral Cancer Trade Secrets in a grant application soliciting funds from the Chinese

National Natural Science Foundation of China (“Chinese Oral Cancer Grant Application”) without RINCH’s knowledge or consent.

122. On information and belief, the Chinese Oral Cancer Grant Application contains data related to miRNA-185 which was generated at RINCH while using RINCH facilities, equipment, reagents, RINCH funds and/or federal funds granted to RINCH.

123. The Chinese Oral Cancer Grant Application also contains at least the following data produced in Drs. Besner and Brigstock’s labs at RINCH including: (1) a re-labeled version of Dr. Besner’s primary exosome data on neural stem cells (*see, e.g.*, Fig. 18); (2) data from Dr. Brigstock and Defendant Chen’s 2014 *Hepatology* Publication (compare Fig. 3A of 2014 *Hepatology* Publication with Fig. 16 of grant); and (3) unpublished electron microscopy data produced in Dr. Brigstock’s lab depicting exosomes (*see, e.g.*, Fig. 21 of grant).

124. The Chinese Oral Cancer Grant Application describes Defendant Chen as providing “International Technology Support” for the application.

125. On information and belief, at least Defendants Zhou and Chen filed the following patent applications sometime in 2017 relating to RINCH’s oral cancer technology and RINCH’s Oral Cancer Trade Secrets without RINCH’s knowledge or consent (collectively, the “Oral Cancer Patent Applications”) (the “Oral Cancer Patent Applications” and “Liver Cancer Patent Applications,” together referred to as “Defendants’ Patent Applications”), including without limitation:

- Chinese Application No. CN 2018 1 0444172.6 for “Exosomes carrying miR-185 and application thereof”;
- International Patent Application No. PCT/CN2018/086347 for “Method for Preventing Oral Cancer”; and
- Chinese Application No. CN 2017 1 0330835.7 for “New method for diagnosing and monitoring oral cancer.”

126. On information and belief, at least Defendants Zhou and Chen filed Chinese Patent Application No. CN 2018 1 0444172.6 on May 10, 2018, and International Patent Application No. PCT/CN2018/086347 on May 10, 2018, both claiming priority to CN 2017 1 0330847.X, which was filed on May 11, 2017. CN 2018 1 0444172.6 published on November 23, 2018, under Publication No. CN 108853131 A. PCT/CN2018/086347 published on November 15, 2018, under Publication No. WO/2018/205978.

127. On information and belief, the subject matter of Chinese Patent Application No. CN 2018 1 0444172.6 and PCT/CN2018/086347 relates to saliva exosome based methods and composition for the diagnosis, staging, and prognosis of oral cancer. In particular, the subject matter relates to the use of exosomes carrying miR-185 in methods for preventing and treating oral cancer, and pharmaceutical compositions containing a modified salivary exosome and its use for preventing and treating oral cancer.

128. On information and belief, at least Defendants Zhou and Chen filed Chinese Patent Application No. 2017 1 0330835.7 on May 11, 2017, which published on November 23, 2018, under Publication No. CN 108872578 A.

129. On information and belief, the subject matter of Chinese Patent Application No. CN 2017 1 0330835.7 relates to a method for monitoring the transformation of oral leukoplakia to oral cancer and for diagnosing oral cancer, comprising monitoring the concentration variation of an oral exosome in a subject suffering from oral leukoplakia, thereby estimating the pathological stage of the disease and the risk of cancer development. In particular, the subject matter relates to a method for identification of suspected oral leukoplakia, comprising measuring the level of miRNA185 in salivary exosomes.

130. A draft of a Chinese patent application related to oral cancer dated January 3, 2017 was found on the Defendant Hard Drives. The “Technical Field” of the application relates to:

[A] painless and simple new method for monitoring the conversion of oral precancerous lesion towards oral cancer, including monitoring changes in the concentration of salivary exosome in a subject, thereby determining the stage in which oral precancerous lesion is located, identifying patients with high risk of cancer before carcinogenesis, applying treatment measures in time to achieve effective prevention and treatment of oral cancer.

131. On information and belief, this draft is related to at least one of the Oral Cancer Patent Applications.

132. On information and belief, Defendants Zhou and Chen derived the subject matter of the Oral Cancer Patent Applications in whole or in part from RINCH Trade Secrets.

133. On information and belief, Defendants Zhou and Chen derived the subject matter of the Oral Cancer Patent Applications in whole or in part from work performed at RINCH by Drs. Brigstock and Besner, and/or one or more of Defendants Zhou and Chen, as well as Zachary Zhou (at Defendants’ direction), using RINCH facilities, equipment, reagents, RINCH funds and/or federal funds granted to RINCH.

134. On information and belief, Defendants Zhou and Chen filed the Oral Cancer Patent Applications at a time when at least one of them was still employed at RINCH.

135. Defendants Zhou and Chen’s filing of the Oral Cancer Patent Applications was in contravention of Defendants Zhou and Chen’s obligations under their respective Employment Agreements.

136. Defendants Zhou and Chen filed the Oral Cancer Patent Applications without the knowledge or consent of RINCH.

137. On information and belief, Defendants Zhou and Chen embarked on a scheme to misappropriate the RINCH Oral Cancer Trade Secrets by setting up companies in China and/or the United States in order to obtain ownership of the Oral Cancer Patent Applications and underlying technology misappropriated from RINCH.

Defendants' Activities Related to Ovarian Cancer and Endometriosis

138. Like liver fibrosis, endometriosis is a fibrotic condition. Endometriosis involves fibrosis of the uterus and a condition in which the layer of tissue that normally covers the inside of the uterus grows outside of it. As noted, *supra*, women with endometriosis have an elevated risk of developing ovarian cancer.

139. miRNA-214 and miRNA-503 are important in therapeutic and diagnostic applications for endometriosis and ovarian cancer.

140. On information and belief, Defendant Chen performed research investigating therapeutic and diagnostic applications of exosomes and miRNAs in ovarian cancer and endometriosis while employed at RINCH and while using RINCH facilities, equipment, reagents, RINCH funds and/or federal funds granted to RINCH.

141. On information and belief, Defendants Zhou and Chen discovered the significance of miRNA-214 and miRNA-503 while employed at RINCH and while using RINCH facilities, equipment, reagents, RINCH funds and/or federal funds granted to RINCH.

142. As part of her authorized work with Dr. Brigstock, Defendant Chen investigated the role of miRNA-214 in liver fibrosis.

143. Some of Defendant Chen's work was published in Dr. Brigstock and Defendant Chen's 2014 publication in *Hepatology*: Chen, L. *et al.* "Epigenetic Regulation of Connective Tissue Growth Factor by MicroRNA-214 Delivery in Exosomes from Mouse or Human Hepatic Stellate Cells," *Hepatology* (2014) 59(3): 1118-29.

144. On information and belief, beginning in 2014, while Defendant Chen was conducting authorized research regarding miRNA-214 in liver fibrosis, she also conducted unauthorized research into the role of miRNA-214 and miRNA-503 in endometriosis and ovarian cancer at RINCH while using RINCH facilities, equipment, reagents, RINCH funds and/or federal funds granted to RINCH.

145. On information and belief, Defendant Chen conducted scientific experiments on or about February 6, 2014, November 26, 2014, and December 8, 2014, at RINCH and while using RINCH facilities, equipment, reagents, RINCH funds and/or federal funds granted to RINCH. On information and belief, these experiments were aimed at studying miRNA-214 and/or miRNA-503 in oral cancer or endometriosis.

146. On information and belief, Defendant Chen provided RINCH ovarian cancer technology and RINCH Ovarian Cancer Trade Secrets for use in two grant applications soliciting funds from the Chinese National Natural Science Foundation of China (“Chinese Ovarian Cancer Grant Applications”) without RINCH’s knowledge or consent.

147. On information and belief, the Chinese Ovarian Cancer Grant Applications contain data related to exosomes, miRNA-214, and miRNA-503 produced at RINCH while using RINCH facilities, equipment, reagents, RINCH funds and/or federal funds granted to RINCH.

148. The Chinese Ovarian Cancer Grant Application also contains a re-labeled table of data copied from Dr. Brigstock and Defendant Chen’s 2014 *Hepatology* Publication (compare Figs. 4A/4B of 2014 *Hepatology* Publication with Figs. 2A/2B of grant).

149. On information and belief, at least one of the Chinese Ovarian Cancer Grant Applications, Application No. 7162063, was funded by the National Natural Science Foundation of China. Work funded by this grant was published in Wu, D. *et al.* “Downregulation of miR-503

contributes to the development of drug resistance in ovarian cancer by targeting PI3K p85” *Arch. Gynecol. Obstet.* (2018) 297: 699-707. (Fig. 8 of Chinese Grant Application No. 7162063 is actually Fig. 3A from the 2014 *Hepatology* Publication with the “pre-mir” language changed).

Defendants’ Activities Related to Liver Fibrosis

150. On information and belief, Defendant Chen traveled to China to attend the International Forum on Research and Application of Exosomes (“IFRAE”) in Beijing International Convention Center on June 30, 2017 without RINCH’s knowledge or consent.

151. On information and belief, Defendant Chen presented RINCH Trade Secrets at this meeting and disclosed RINCH Trade Secrets in conversations before and/or after this meeting, including research relating to liver fibrosis, without attribution to Dr. Brigstock or RINCH, and without authorization or consent from RINCH as required by RINCH.

152. At least slide 17 of Defendant Chen’s IFRAE presentation contains data representing RINCH Trade Secrets that was not yet publicly disclosed as of June 30, 2017. That previously undisclosed data relates to liver fibrosis and was originally produced in Dr. Brigstock’s lab as part of a manuscript later submitted to the *Hepatology* journal on or about July 17, 2017. This data was subsequently submitted and published as Chen *et al.*, “Therapeutic effects of serum extracellular vesicles in liver fibrosis,” *Journal of Extracellular Vesicles*, 7:1, 1461505 (2018) DOI: 10.1080/20013078.2018.1461505.

153. On information and belief, Defendant Chen discussed RINCH liver fibrosis data and technology (and may have also disclosed RINCH Trade Secrets during her discussions with attendees at the conference) without RINCH’s knowledge and consent at the World Stem Cell Summit in Miami, Florida on or about January 25, 2018.

154. The title of the session at which Chen spoke was “Advancing the exosome; extracellular vesicle into the mainstream.”

155. Chen's biography as posted on the World Stem Cell Summit's webpage does not mention her employment at RINCH:

Pioneer Scientist in liver fibrosis, the Head of the Human Liver Cell Lab in UCSD. More than two decades of academic experience in the study of fibrotic and metabolic diseases, including exosome biomarker assay; First identified mechanisms that account for the anti-fibrotic properties of exosomes in hepatocytes of healthy individuals; First revealed proteomic and transcriptomic biomarkers in serum, urine and saliva for liver diseases;

Patent owner of exosome therapy for hepatic fibrosis

Defendants' Activities Related to Exosome Enrichment

156. While employed at RINCH, Defendants Zhou and Chen routinely performed and tested methods of exosome separation and/or concentration/enrichment while employed at RINCH in the fields of oncology, infectious diseases, and fibrotic diseases.

157. On information and belief, Defendants Zhou and Chen utilized the RINCH Exosome Enrichment Trade Secrets to develop methods and kits for purifying exosomes to conduct "liquid biopsies."

158. On information and belief, these methods and kits were developed while one or more of Defendants Zhou and Chen were employed at RINCH, and were developed using RINCH facilities, equipment, reagents, RINCH funds and/or federal funds granted to RINCH.

159. On information and belief, at least Defendants Zhou and Chen filed the Liver Cancer Patent Applications in China in 2016. In addition to liver cancer, these applications relate to RINCH's exosome enrichment technology and the RINCH Exosome Enrichment Trade Secrets.

160. On information and belief, on or about June 30, 2017, Defendant Zhou traveled to China to attend the IFRAE to discuss exosome research in whole or in part performed at RINCH.

161. On information and belief, Defendant Zhou presented RINCH Exosome Enrichment Trade Secrets at this meeting, and in conversations before and/or after this meeting,

including data and technology relating to exosome enrichment and “liquid biopsies,” without attribution to RINCH, Drs. Besner or Brigstock, and without authorization or consent from RINCH.

162. A press release regarding the IFRAE conference described Defendants Zhou’s IFRAE presentation as follows:

Zhou Yu, a pediatric surgical specialist at Nationwide Children’s Hospital, reviewed the progress and status quo of exosome-based “liquid biopsy” technology and reported his research on the treatment of exosomes in neural stem cells and mesenchymal stem cells Results, the standardization of clinical application of exosomes in-depth elaboration.

163. On information and belief, the IFRAE conference was sponsored, in part, by Avalon.

Defendants’ Other Activities

164. Additional activities undertaken by the Defendants, including at least Defendants Zhou and Chen, that were done without RINCH’s knowledge or authorization and which further support RINCH’s claims herein are set forth in the Criminal Indictment (*see, e.g.*, Section entitled “Overt Acts”).

COUNT I - BREACH OF CONTRACT (AGAINST DEFENDANTS ZHOU & CHEN)

(PART 1: BREACH OF EXPRESS CONTRACT TERMS)

165. RINCH realleges and incorporates by reference the allegations contained in Paragraphs 1 through 164 of this Complaint.

166. RINCH invested significant resources and time to acquire the knowledge and technology necessary to identify and develop the scientific and technical information relating to

the RINCH Trade Secrets, confidential, and/or proprietary information, or other intellectual property relating to its regenerative medicine and exosome-based therapeutics technology.

167. The Employment Agreements referred to herein represented valid and binding contracts between RINCH and Defendant Zhou and RINCH and Defendant Chen.

168. RINCH has complied with all contractual obligations and duties under the Employment Agreements with Defendants Zhou and Chen.

169. Defendants Zhou and Chen's use of the RINCH Trade Secrets, confidential, and/or proprietary information, or other intellectual property relating to RINCH's regenerative medicine and exosome-based therapeutics technology constituted a material breach of the Employment Agreements.

170. The RINCH Trade Secrets, confidential, and/or proprietary information, or other intellectual property relating to RINCH's regenerative medicine and exosome-based therapeutics technology was maintained by RINCH as confidential and was not readily available to RINCH's competitors or the public.

171. Defendants Zhou and Chen's use of the RINCH Trade Secrets, confidential, and/or proprietary information, or other intellectual property relating to RINCH's regenerative medicine and exosome-based therapeutics technology breached at least the following provisions of the Employment Agreements:

- (a) To hold all Confidential Information in the strictest confidence;
- (b) Not to release or disclose Confidential Information, unless required by job duties, and then only in accordance with NCH policies;
- (c) Not to access computer system(s) other than for non-intended use, personal gain, or the gains of another;

- (d) To report any violation of computer system security to their manager or other appropriate individual;
- (e) Not to misuse the NCH computer systems in any way;
- (f) To notify Information Services of changes in their job class or employment status so that their authorized access could be reevaluated;
- (g) To notify Information Services of changes in their job class or employment status so that their authorized access could be reevaluated;
- (h) To assign all right, title, and/or interest in Defendants' Patent Applications to RINCH and only RINCH, including all funds, royalties, or revenues derived therefrom;
- (i) To promptly disclose in writing to the Patents and Copyrights Committee each invention authored, developed, or invented that is the property of RINCH, including the inventions that are the subject of Defendants' Patent Applications;
- (j) To timely submit financial disclosure forms pursuant to NCH's Research Conflict of Interest policy; and
- (k) To comply with the obligations in the Outside Activities Policy.

172. Zhou and Chen's breach of contract resulted in a "head-start" advantage in its development and patenting of regenerative medicine and exosome-based therapeutics technology by using information that was not otherwise publicly known.

173. Defendants Zhou and Chen's breach of contract resulted in and continues to result in economic, as well as irreparable, harm to RINCH, including the loss of goodwill with any of RINCH's actual or potential licensing partners.

174. The harm caused by Defendants Zhou and Chen's material breach of the Employment Agreements as described above, including their use of the RINCH Trade Secrets, confidential, and/or proprietary information, or other intellectual property relating to RINCH's regenerative medicine and exosome-based therapeutics technology in order to file patent applications, and potentially allow those applications to publish and exist as potential prior art to RINCH's own applications, and obtain patents on technologies that rightfully belong to RINCH through one or more of the Defendants' Patent Applications is not fully remedied at law. With respect to these activities, RINCH faces an immediate and ongoing threat of irreparable harm.

175. As a result of the complained-of acts, the Defendants' Patent Applications should be reassigned to RINCH, and/or such other fair and just equitable relief, such as the imposition of a constructive trust in favor of RINCH, should be granted.

(PART 2: BREACH OF COVENANT OF GOOD FAITH AND FAIR DEALING)

176. RINCH realleges and incorporates by reference the allegations contained in Paragraphs 1 through 175 of this Complaint.

177. Every contract in Ohio contains an implied covenant of good faith and fair dealing. This implied covenant requires parties to deal reasonably with each other and to refrain from taking opportunistic advantage of each other. The implied covenant is violated when a party acts in a manner which would deprive the other party of the right to receive the benefits of the agreement.

178. The Employment Agreements referred to herein represented valid and binding contracts between RINCH and Defendant Zhou, and RINCH and Defendant Chen.

179. Defendants Zhou and Chen each had an implied covenant of good faith and fair dealing arising out of their Employment Agreements with RINCH.

180. RINCH has complied with all contractual obligations and duties under the Employment Agreements.

181. Under the Employment Agreements, Defendants Zhou and Chen owed a duty to RINCH to deal with RINCH fairly and in good faith.

182. Defendants Zhou and Chen had a good-faith duty not to disclose or disseminate the trade secret, confidential, and/or proprietary information disclosed by RINCH to Defendants Zhou and Chen under the Employment Agreements to solely advance Defendants Zhou and Chen's private and non-RINCH business interests and/or to harm RINCH's business interests. Defendants Zhou and Chen also had a good-faith duty not to use the RINCH Trade Secrets, confidential, and/or proprietary information, or other intellectual property in compliance with their Employment Agreements and for the benefit of RINCH for any purpose other than to evaluate or pursue research and business relationships between them and RINCH in the area of regenerative medicine and exosome-based therapeutics technology. Without informing RINCH and seeking RINCH's approval, license, or permission, Defendants Zhou and Chen violated their duties to RINCH at least by:

- a. using the RINCH Trade Secrets, confidential, and/or proprietary information, or other intellectual property to make, have made, or identify antibodies or other chemical moieties related to the area of regenerative medicine and exosome-based therapeutics technology to pursue their private interests;
- b. giving presentations to third parties and filing patent applications disclosing the RINCH Trade Secrets, confidential, and/or proprietary information, or other intellectual property, and pursuing patent claims covering the area of regenerative medicine and exosome-based therapeutics technology identified

using the RINCH Trade Secrets, confidential, and/or proprietary information, or other intellectual property to pursue their private interests;

- c. pursuing grant funding from foreign institutions based at least in part on research and development efforts relating to regenerative medicine and exosome-based therapeutics technology, and using the RINCH Trade Secrets, confidential, and/or proprietary information, or other intellectual property, suggesting to such institutions that RINCH's technology had been licensed to Defendants, and sharing information regarding said research and development efforts and results with such institutions without disclosing these opportunities with RINCH;
- d. failing to properly disclose intellectual property to RINCH, failing to name RINCH personnel as inventors and failing to provide assignment rights to RINCH in the Defendants' Patent Applications;
- e. pursuing private business relationships with third parties (including at least Beijing GenExosome, as well as Defendants GenExosome and Avalon) based at least in part on research and development efforts relating to regenerative medicine and exosome-based therapeutics technology, and using the RINCH Trade Secrets, confidential, and/or proprietary information, or other intellectual property, suggesting to third parties that RINCH's technology had been licensed to Defendants, and sharing information regarding said research and development efforts and results with third parties that had never been shared with RINCH; and

f. failing to timely disclose to or seek permission from RINCH regarding each of the above activities, and misleading RINCH regarding Defendants Zhou and Chen's use of RINCH information and the results of its research and development efforts stemming therefrom.

183. By using the RINCH Trade Secrets, confidential, and/or proprietary information, or other intellectual property relating to regenerative medicine and exosome-based therapeutics technology while failing to tell or misleading RINCH about such activities and the results obtained therefrom, by filing patent applications disclosing the RINCH Trade Secrets, confidential, and/or proprietary information, or other intellectual property and claiming antibodies or other binding moieties identified using the RINCH Trade Secrets, confidential, and/or proprietary information, or other intellectual property by failing to properly name RINCH personnel as inventors in the Defendants' Patent Applications, and by pursuing business relationships with third parties based at least in part on the RINCH Trade Secrets, confidential, and/or proprietary information, or other intellectual property relating to regenerative medicine and exosome-based therapeutics technology using the RINCH Trade Secrets, confidential, and/or proprietary information, or other intellectual property without telling RINCH, Defendants Zhou and Chen took opportunistic advantage of RINCH in a way that, while not resolved explicitly via the Employment Agreements, was contrary to RINCH's understanding and reasonable expectation of Defendants Zhou and Chen's course of performance under the Employment Agreements.

184. By way of non-limiting examples, RINCH's reasonable expectations under the Employment Agreements were that: (i) it would be informed of Defendants Zhou and Chen's collaboration attempts that relied on RINCH-derived information; (ii) RINCH would be informed of and appropriately named as an owner and assignee of any patent applications filed by

Defendants Zhou and Chen containing or claiming RINCH-derived information; and (iii) RINCH would be informed of breaches of the Employment Agreements by Defendants Zhou and Chen. Defendants Zhou and Chen's actions have deprived RINCH of the right to receive the benefits of the Employment Agreements, contrary to RINCH's reasonable expectations thereunder. Zhou and Chen breached the covenant of good faith and fair dealing under the Employment Agreements to solely advance Zhou and Chen's' own business interests and/or to harm RINCH's business interests.

185. No rights to RINCH's confidential information, the RINCH Trade Secrets, confidential, and/or proprietary information, or any other intellectual property were transferred to Zhou and Chen under the Employment Agreements. Defendants Zhou and Chen did not have the right to make, have made, use or sell for any purpose any product or other item using, incorporating or derived from any of the RINCH Trade Secrets, confidential, and/or proprietary information, or other intellectual property. The RINCH Trade Secrets, confidential, and/or proprietary information, know-how information, or other intellectual property was disclosed to Zhou and Chen solely in connection with their respective employment at NCH and/or RINCH. Defendants Zhou and Chen's use of the RINCH Trade Secrets, confidential, and/or proprietary information, know-how information, or other intellectual property relating to regenerative medicine and exosome-based therapeutics technology without telling or sharing its results with RINCH (or, in some cases, intentionally misleading RINCH about Defendants Zhou and Chen's reliance on and use of RINCH information in its research efforts) unfairly deprived RINCH of the ability to evaluate or pursue a business relationship between the parties and/or otherwise evaluate and consider Defendants Zhou and Chen's results, and gave Defendants Zhou and Chen an unfair advantage in developing regenerative medicine and exosome-based therapeutics technology and pursuing

potential business opportunities with third parties without RINCH. Defendants Zhou and Chen's actions were intentional and designed to advance their own business interests and/or to harm RINCH's business interests.

186. While being obligated under the Employment Agreements, Defendants Zhou and Chen engaged in a scheme designed to interfere with and deprive RINCH of the full and fair rights to the RINCH Trade Secrets, confidential, and/or proprietary information, or other intellectual property including RINCH's ability to obtain full intellectual property protection over same. Defendants Zhou and Chen's disclosure of the RINCH Trade Secrets, confidential, and/or proprietary information, or other intellectual property in its patent applications unfairly deprived RINCH of the benefit of its information being confidential or otherwise not being generally known, understood, and/or appreciated by the public in the relevant timeframe, including before RINCH had filed its own patent applications. Defendants Zhou and Chen's attempt to claim in its patent applications regenerative medicine and exosome-based therapeutics technology identified using the RINCH Trade Secrets, confidential, and/or proprietary information, or other intellectual property without naming RINCH personnel as inventors or providing rights by assignment to RINCH, deprived RINCH of its rightful ownership of and intellectual property rights over regenerative medicine and exosome-based therapeutics technology and other discoveries therefrom, including ownership and control over any patent applications and issued claims covering such regenerative medicine and exosome-based therapeutics technology, and hinders RINCH's ability to obtain allowance of, or the full scope of protection that should otherwise be afforded by, RINCH's own patent applications.

187. The wrongful acts of Defendants Zhou and Chen as described above constitute material breaches of the Employment Agreements. To the extent that any part of the RINCH Trade

Secrets, confidential, and/or proprietary information, or other intellectual property subsequently was or became generally known, understood, and/or appreciated by the public, Defendants Zhou and Chen were not aware of any such disclosures during the relevant timeframe, and therefore Defendants Zhou and Chen could not have relied on any such public disclosures, further evidencing their bad-faith breach of the covenant of good faith and fair dealing under the Employment Agreements. The wrongful acts of Defendants Zhou and Chen as described above all relate to RINCH's disclosure of the RINCH Trade Secrets, confidential, and/or proprietary information, or other intellectual property under the terms of the Employment Agreements.

188. Defendants Zhou and Chen's deliberate actions were unreasonable and a breach of the implied covenant of good faith and fair dealing that proximately caused irreparable harm to RINCH.

189. As a result of Defendants Zhou and Chen's complained-of-acts, the Defendant's Patent Applications should be reassigned to RINCH, and/or such other fair and just equitable relief, such as the imposition of a constructive trust in favor of RINCH, should be granted.

COUNT II - ACTUAL AND THREATENED MISAPPROPRIATION OF TRADE SECRETS IN VIOLATION OF DTSA (AGAINST ALL DEFENDANTS)

190. RINCH realleges and incorporates by reference the allegations contained in Paragraphs 1 through 189 of this Complaint.

191. RINCH is the owner of certain trade secrets within the meaning of and subject to the protection of the DTSA, 18 U.S.C. § 1839(3), namely the RINCH Trade Secrets.

192. The complained of acts described herein include activities by the Defendants, in interstate commerce, after the enactment of the DTSA on May 11, 2016.

193. During their employment, RINCH provided Defendants Zhou and Chen, with access to the RINCH Trade Secrets, confidential, and/or proprietary business information, or other

intellectual property as discussed herein to facilitate the performance of their jobs and in furtherance of RINCH's business. RINCH placed great trust and confidence in Defendants Zhou and Chen to protect and to not use the RINCH Trade Secrets, confidential, and/or proprietary information, other intellectual property, and other RINCH confidential business information, except for the sole purpose of benefiting RINCH, as was specified in their respective Employment Agreements.

194. The RINCH Trade Secrets, confidential, and/or proprietary business information, or other intellectual property described herein derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable through proper means by, another person who could obtain economic value from the disclosure or use of the information. Such information is also related to products and services that are used or intended for use in interstate commerce.

195. As described herein, RINCH has taken reasonable measures to keep the RINCH Trade Secrets, confidential, and/or proprietary business information, or other intellectual property secret.

196. In view of the express terms of their respective Employment Agreements, and based on the experience working for RINCH, Defendants Zhou and Chen had actual or constructive knowledge that the information described herein and which they obtained during their employment constituted RINCH's trade secrets.

197. Based on their participation in the industry, access to Defendants Zhou and Chen's biographic data and their Employment Agreements, among other reasons, GenExosome and Avalon also had actual or constructive knowledge that the information described herein and which

GenExosome and Avalon obtained from Defendants Zhou and Chen constituted RINCH's trade secrets.

198. Defendants misappropriated the RINCH Trade Secrets.

199. Defendants have used, continue to use, and intend to use in interstate commerce the RINCH Trade Secrets misappropriated from RINCH.

200. Without authorization, Defendants printed, downloaded, emailed, transmitted, communicated, conveyed, and/or otherwise possess the RINCH's Trade Secrets.

201. Defendants are in possession of the RINCH Trade Secrets, knowing they were stolen or appropriated, obtained, or converted without authorization.

202. As a result of Defendants' unlawful conduct, RINCH has suffered and will continue to suffer damages including lost revenue and profits, loss of competitive advantage, loss of the value of its trade secrets, loss of business goodwill, and harm to its reputation.

203. By engaging in the actions described above, Defendants have violated the DTSA, 18 U.S.C. §§ 1831-39.

204. The harm suffered by RINCH is continuing and cannot be compensated by money damages alone; thus, RINCH is entitled to, among other things, monetary damages and injunctive relief under the DTSA.

205. RINCH is also entitled to an award of exemplary damages and attorneys' fees as a result of Defendants' willful and malicious misappropriation of the RINCH Trade Secrets pursuant to 18 U.S.C. §§ 1836(b)(3)(C), (D).

**COUNT III – VIOLATION OF OHIO
UNIFORM TRADE SECRETS ACT (AGAINST ALL DEFENDANTS)
(OHIO CODE §§ 1331.61-.69)**

206. RINCH realleges and incorporates by reference the allegations contained in Paragraphs 1 through 205 of this Complaint.

207. The scientific and technical information that Defendants misappropriated from RINCH, including but not limited to the RINCH Trade Secrets, was kept confidential by RINCH and was subject to efforts that were reasonable under the circumstances to maintain its secrecy.

208. The RINCH Trade Secrets were sufficiently secret that economic value, actual or potential, could be derived from their not being generally known, and not being readily ascertainably by proper means by, other persons who could obtain economic value from their disclosure or use.

209. The RINCH Trade Secrets were secret within the meaning of the Ohio Trade Secrets Act, Ohio Rev. Code §§ 1333.61-1333.69.

210. The Ohio Trade Secrets Act, Ohio Rev. Code §§ 1333.61-1333.69, prohibits Defendants' misappropriation of the RINCH Trade Secrets.

211. Defendants' disclosure of the RINCH Trade Secrets and uses beyond those permitted by the Employment Agreements was without authorization.

212. For example, Defendants' use and disclosure of the RINCH Trade Secrets in applying for patents (such as the Defendants' Patent Applications) and in the furtherance of Defendants' business interests in competition with RINCH was without authorization.

213. Defendants' actions of disclosure and unpermitted use constitute misappropriation of the RINCH Trade Secrets in violation of the Ohio Trade Secrets Act, Ohio Rev. Code §§ 1333.61-1333.69.

214. Defendants' misappropriation resulted in a "head-start" advantage in its development and patenting of regenerative medicine and exosome-based therapeutics technology.

215. Defendants' misappropriation resulted in and continues to result in economic harm to RINCH, including the loss of goodwill with any of RINCH's potential licensing partners.

216. On information and belief, Defendants' conduct was willful and malicious, and intentionally calculated to damage RINCH.

217. Defendants' willful and malicious violation of the Ohio Trade Secrets Act, Ohio Rev. Code §§ 1333.61-1333.69, entitles RINCH to an award of treble damages and reasonable attorneys' fees pursuant to §§ 1333.63, 1333.64.

218. The harm caused by Defendants' misappropriation as described above, including Defendants' use of RINCH Trade Secrets in order to file patent applications and obtain patents on technologies that rightfully belong to RINCH (the Defendants' Patent Applications), is not fully remedied at law. With respect to these activities, RINCH faces an immediate and ongoing threat of irreparable harm.

219. As a result, Defendants' Patent Applications should be reassigned to RINCH and/or such other fair and just equitable relief, such as the imposition of a constructive trust in favor of RINCH, should be granted.

PRAYER FOR RELIEF

WHEREFORE, RINCH requests that it be awarded the following relief:

(a) All compensatory damages, and further damages including, but not limited to, lost profits, as may be determined to have resulted from Defendants' breach of contract, breach of good faith and fair dealing, and/or misappropriation of the RINCH Trade Secrets;

(b) Disgorgement of all unjust enrichment and any benefits that flowed or resulted from Defendants' breach of contract, breach of good faith and fair dealing, and/or misappropriation of the RINCH Trade Secrets;

(c) Imposition of a reasonable royalty against Defendants for the unauthorized use and disclosure of the RINCH Trade Secrets;

(d) Reassignment of the Defendants' Patent Applications, and any and all related applications that have been filed or will be filed, which use and/or disclose the RINCH Trade Secrets and/or confidential information, or alternatively where the Court finds that such Defendants' Patent Applications could not have been filed or pursued, but for Defendants Zhou and Chen's breach of good faith and fair dealing;

(e) A constructive trust in favor of RINCH and/or patent reassignment to RINCH with respect to the Defendants' Patent Applications that Defendants filed, and any and all related applications that have been filed or will be filed, which use and/or disclose the RINCH Trade Secrets and/or confidential information, or alternatively where the Court finds that such Defendants' Patent Applications could not have been filed or pursued, but for Defendants Zhou and Chen's breach of good faith and fair dealing;

(f) Enjoin Defendants from any further use of confidential or trade secret information conveyed by RINCH, and from further prosecution of patent applications which use and/or disclose the RINCH Trade Secrets and/or other RINCH confidential and proprietary information, except as necessary to ensure that ownership of such applications is properly transferred to RINCH;

(g) Exemplary damages for Defendants' willful and malicious misappropriation pursuant to Ohio Rev. Code § 1333.63 and/or DTSA § 1836(b)(3)(C);

- (h) Punitive damages for breach of contract sufficient to both punish Defendants and to deter future such conduct by Defendants and others;
- (i) All attorneys' fees, costs, and other expenses incurred by RINCH as provided by Ohio Rev. Code § 1333.64 and/or DTSA § 1836(b)(3)(D);
- (j) Any injunctive relief deemed necessary to remedy the complained of acts flowing from Defendants' breach of contract as provided by Ohio Rev. Code § 1333.62 and/or DTSA § 1836(b)(3)(A);
- (k) Prejudgment, post-judgment, and other interest as permitted by law;
- (l) Assignment of any monetary relief or property obtained by the U.S. Government based on its Forfeiture Claims in the Criminal Indictment; and
- (m) Such other relief as the Court deems just and necessary.

Respectfully submitted,
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JURY TRIAL DEMAND

Plaintiff demands a trial by jury on all of their claims for relief that are so triable.

Respectfully submitted,

/s/ Martha Brewer Motley

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